

Please evaluate
my talk via the
mobile app!

Mapping Etsy's Frontend

Tools and Techniques for
Managing Complexity at Scale

@danielespeset

Brought to you by



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Etsy

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Etsy

Etsy

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Etsy

A global marketplace for
buying and selling unique goods.

Etsy

@danielespeset

18M

ITEMS

listed

— OVER —

25

— million —

MEMBERS

Etsy

@danielespeset

600

MILLION

MONTHLY
VISITORS

15

BILLION

PAGEVIEWS
per month

Etsy

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roughly
180 engineers

Etsy

@danielespeset

50 deploys a day

Etsy

@danielespeset

Deployinator

Account: despeset [logout](#)
Deploy Host: deploy.etsycorp.com is up
Stack:



Version: Test: 09079f4fbd-20140227-202157-UTC Princess: 09079f4fbd-20140227-202157-UTC Production: 09079f4fbd-20140227-202157-UTC

#push topic: lisa + krunal* | diego

Watch

cfairbanks

on prod
5m since 3:41

Deploy Logs

Deploy Logs

web_config - 2014-02-27 20:45:02 | CONFIG | mhernandez | CONFIG PRODUCTION Deploy: old 5dd823a58d, new: d902c20e34 | [RUN LOG](#)

IRC Push Queue

desp	.join	15:15
pushbot	has set topic: <princess> lacy + krunal* + bmacri* fairbanks + kgessner + ahmed + desp	15:15
pushbot	fairbanks kgessner desp : You're up	15:20
desp	.in	15:21
pushbot	has set topic: fairbanks + kgessner + desp*	15:21
kgessner	.in	15:21
pushbot	has set topic: fairbanks + kgessner* + desp*	15:21
fairbanks	.in	15:21
pushbot	has set topic: fairbanks* + kgessner* + desp*	15:21
Jenkins	Starting build #26559 for job prod	15:41
devbot	PRODUCTION deployed by cfairbanks build: 09079f4fbd-20140227-202157-UTC took: 253.2 seconds diff: http://et.sy/1xxw7t9 runlog: http://et.sy/7riaglc	15:41
pushbot	fairbanks kgessner desp : Your code is live. Time to watch graphs: http://et.sy/et5cp	15:41
devbot	Committers in above push: Chris Fairbanks (301), Kevin Gessner (66), Daniel Espeset (3), Ross Snyder (28)	15:42
Jenkins	Project prod build #26559: SUCCESS in 35 sec: http://ci.etsycorp.com/job/prod/26559/	15:42

Etsy

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Anybody can touch anything.

Etsy

@danielespeset

Anybody can touch anything.

try not to break the site

Etsy

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Continuous Experimentation

Etsy

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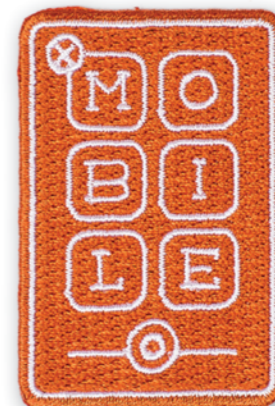
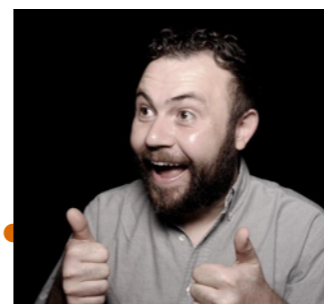
Engineers own their code
through the entire stack.

Etsy

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Bootcamps



Our frontend is made up of
300
different “pages”

At any given time we
may be running dozens
of experiments per page

$$2^{12} = 4,096$$

Etsy

@danielespeset

$$2^{12} \times 300 = 1,228,800$$

Etsy

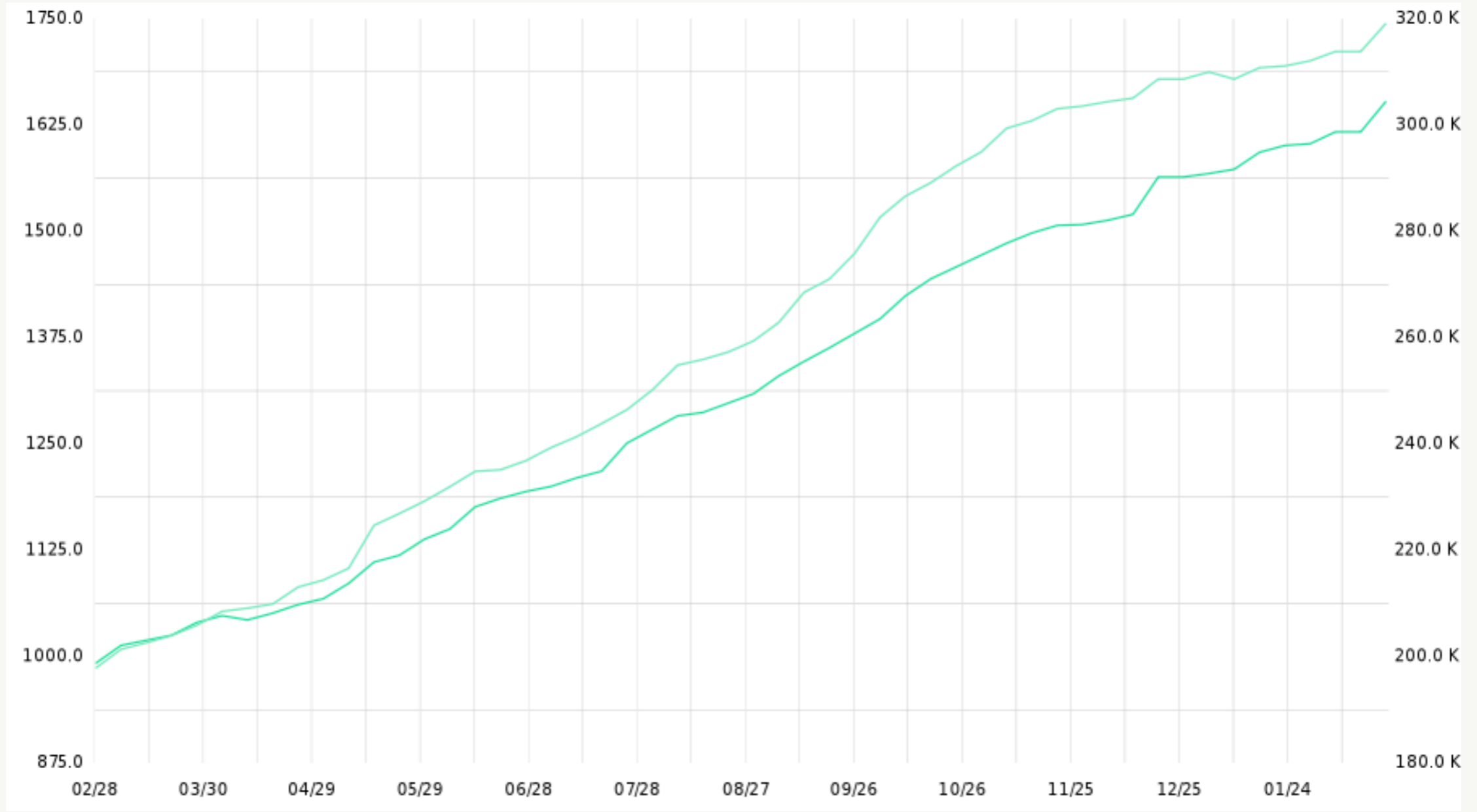
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OMG, how do actually
you do anything?

Etsy

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12 month growth of CSS code



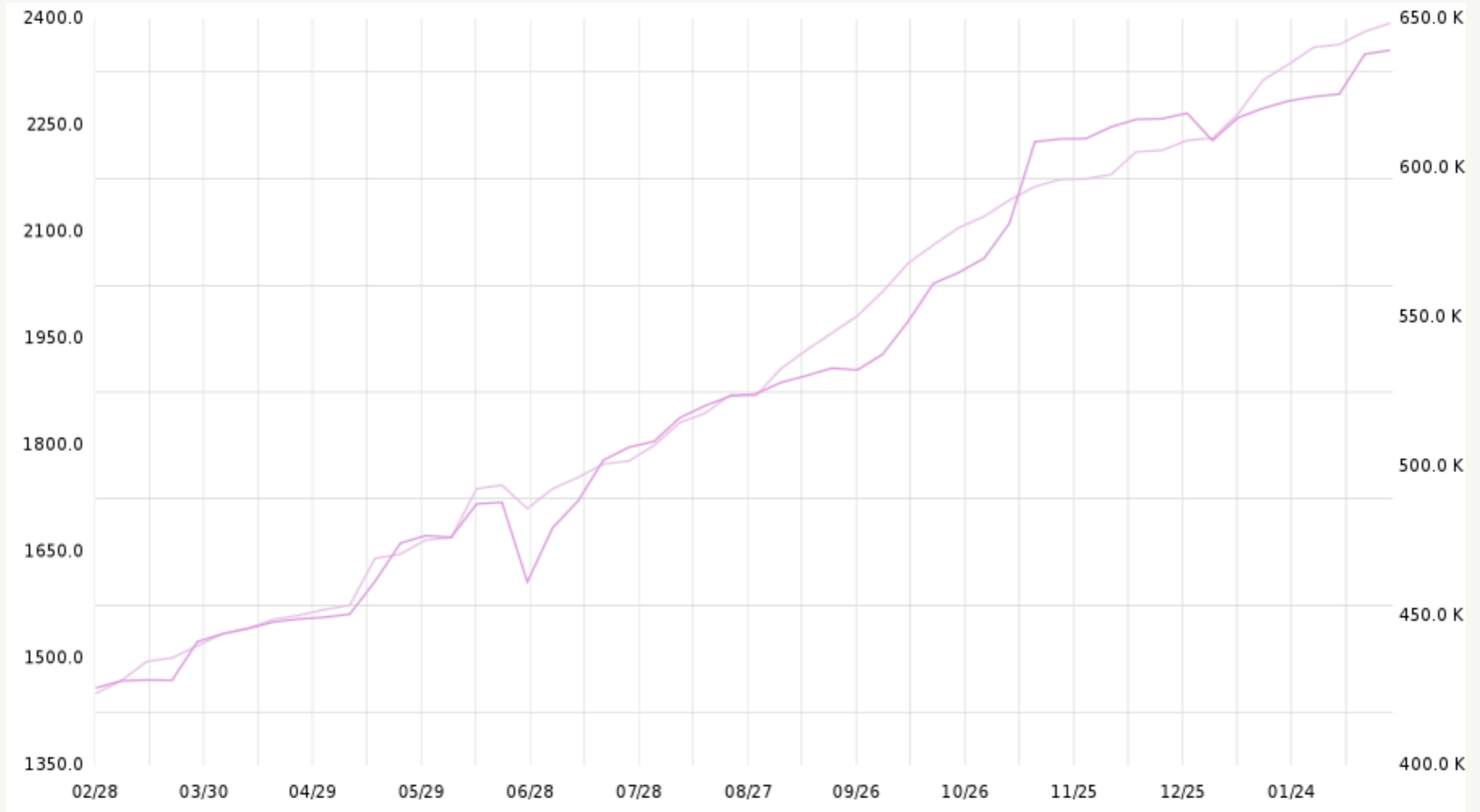
last year
992 files
197,812 lines

last week
1,653 files (1.67x)
319,152 lines (1.61x)



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12 month growth of JavaScript code



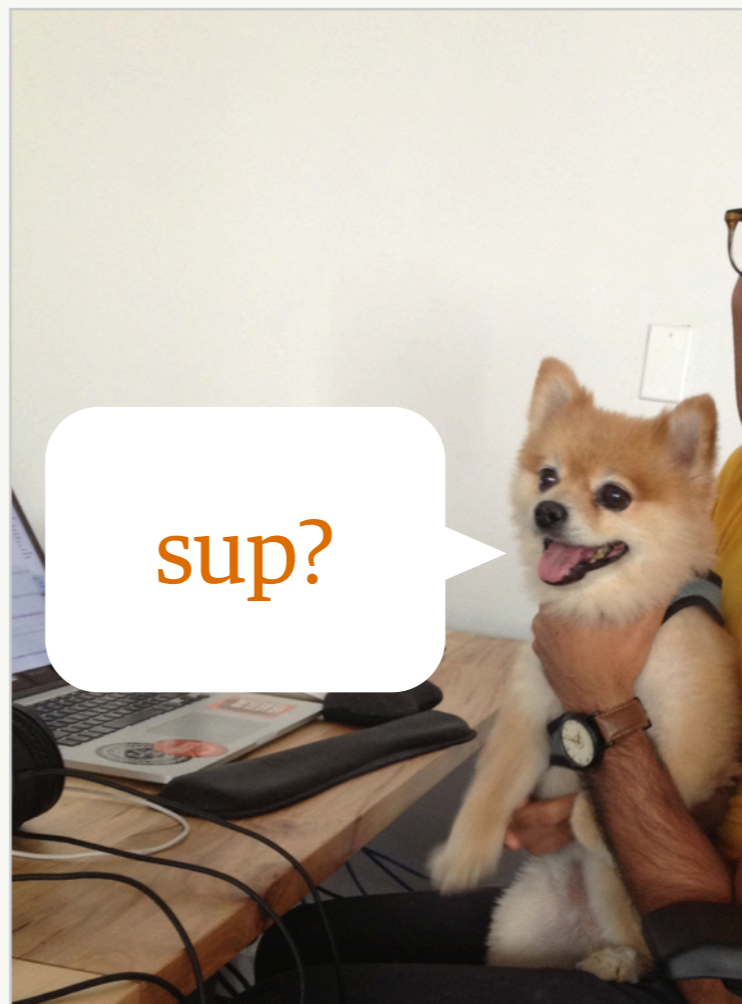
last year
1,451 files
425,915 lines

last week
2,394 files (1.65x)
639,484 lines (1.5x)



Etsy

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Etsy

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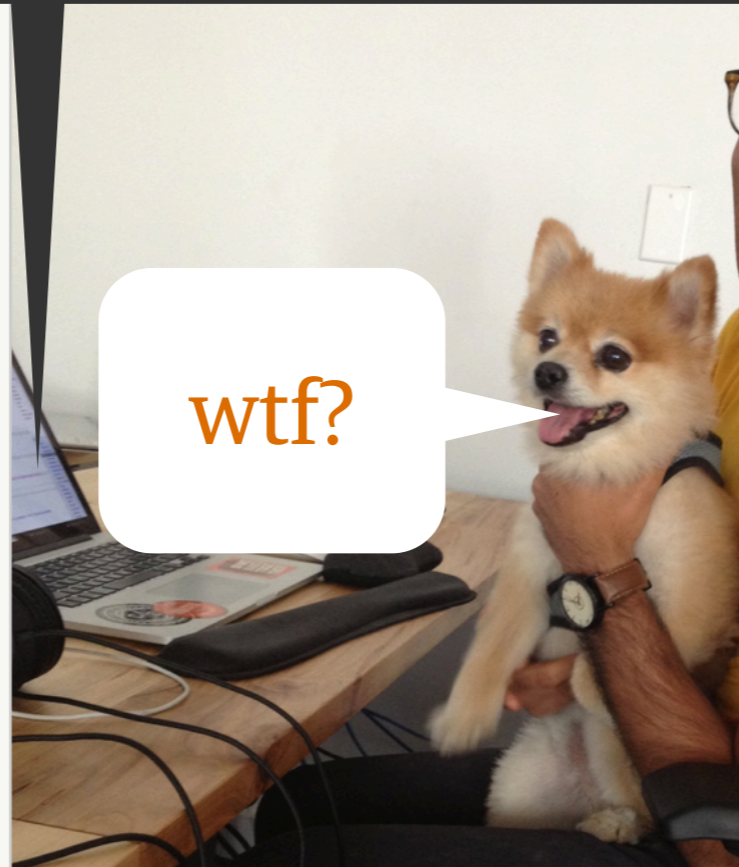
modules/buttons.css

```
html * #buttons button.button {
```



modules/buttons.css

```
html * #buttons button.button {
```



```
$css /> grep "@import modules/buttons"
```




```
$css /> grep "@import modules/buttons"
```



```
a/browse.css  
a/taxeditor.css  
a/taxonomies.css  
a/weddings.css  
b/modules-responsive.css  
b/modules.css  
a/orders/refund.css  
a/scout/scout.css  
c/account/credit-card.css  
c/bill/autobilling.css  
c/bill/index.css  
c/bill/payments.css  
c/shop/registration/billing.css
```



```
$css/> for ... grep "@import $1" ...
```



```
base-responsive  
base  
base_after_inline
```



```
a/browse.css  
a/taxeditor.css  
a/taxonomies.css  
a/weddings.css  
b/modules-responsive.css  
b/modules.css  
a/orders/refund.css  
a/scout/scout.css  
c/account/credit-card.css  
c/bill/autobilling.css  
c/bill/index.css  
c/bill/payments.css  
c/shop/registration/billing.css
```

```
$css/> for ... grep "@import $1" ...
```

```
/base-responsive  
/base  
/base_after_inline
```

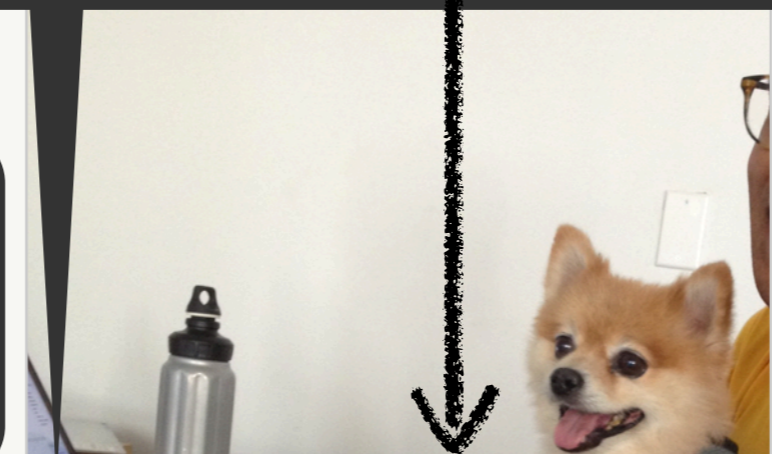
```
c/template_editor  
c/mini  
a/scout/dashboard
```



```
a/browse.css  
a/taxeditor.css  
a/taxonomies.css  
a/weddings.css  
b/modules-responsive.css  
b/modules.css  
a/orders/refund.css  
a/scout/scout.css  
c/account/credit-card.css  
c/bill/autobilling.css  
c/bill/index.css  
c/bill/payments.css  
c/shop/registration/billing.css
```

```
$templates/> for ... grep "{% css=$1" ...
```

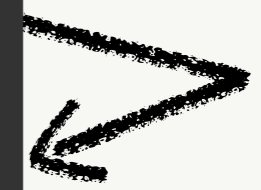
```
/base-responsive  
/base  
/base_after_inline
```



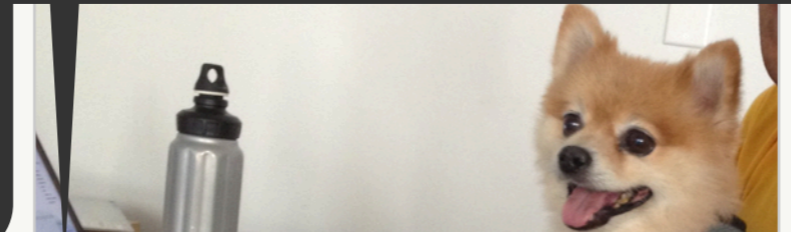
```
a/browse.css  
a/taxeditor.css  
a/taxonomies.css  
a/weddings.css
```

```
wholesale/modules/vendor_avatar responsive.css  
c/t wholesale/modules/address_from_array d.css  
c/n wholesale/pages/purchase_order/modules/uneditable_fields/payment_method .css  
a/s wholesale/pages/purchase_order/modules/uneditable_fields/payment_terms it-card.css  
wholesale/pages/purchase_order/modules/uneditable_fields/ship_date ling.css  
wholesale/pages/purchase_order/modules/uneditable_fields/billing_address ss  
wholesale/pages/purchase_order/modules/uneditable_fields/shipping_address s.css  
wholesale/pages/purchase_order/modules/product_grid ation/billing.css  
modules/time_utils  
base
```

modules/deferred_clientlogger
modules/jquery
modules/async_analytics_init
notice/experiment_notice
modules/locale/dismissible_link
pages/recommendations/friends/v2/modules/gift-ideas-reminder
header
pages/translator/_modules/md5_overlay
modules/breadcrumbs
pages/browse/_modules/footer
footer



/base-responsive
/base
/base_after_inline



a/browse.css
a/taxeditor.css
a/taxonomies.css
a/weddings.css

wholesale/modules/vendor_avatar
c/t wholesale/modules/address_from_array
c/n wholesale/pages/purchase_order/modules/uneditable_fields/payment_method
a/s wholesale/pages/purchase_order/modules/uneditable_fields/payment_terms
wholesale/pages/purchase_order/modules/uneditable_fields/ship_date
wholesale/pages/purchase_order/modules/uneditable_fields/billing_address
wholesale/pages/purchase_order/modules/uneditable_fields/shipping_address
wholesale/pages/purchase_order/modules/product_grid
modules/time_utils
base

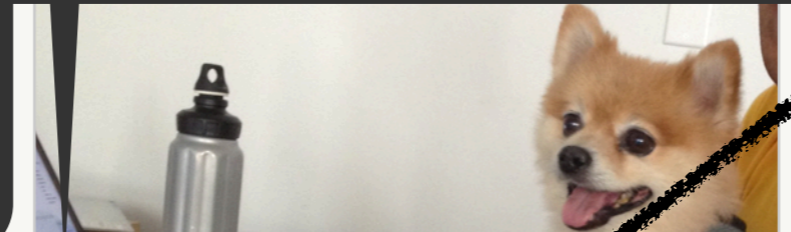
onsive.css
d.css
css
it-card.css
ling.css
ss
s.css
ation/billing.css

Etsy

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```
modules/deferred_clientlogger
modules/jquery
modules/async_analytics_init
notice/experiment_notice
modules/locale/dismissible_link
pages/recommendations/friends/v2/modules/gift-ideas-reminder
header
pages/translator/_modules/md5_overlay
modules/breadcrumbs
pages/browse/_modules/footer
footer
```

```
/base-responsive
/base
/base_after_inline
```

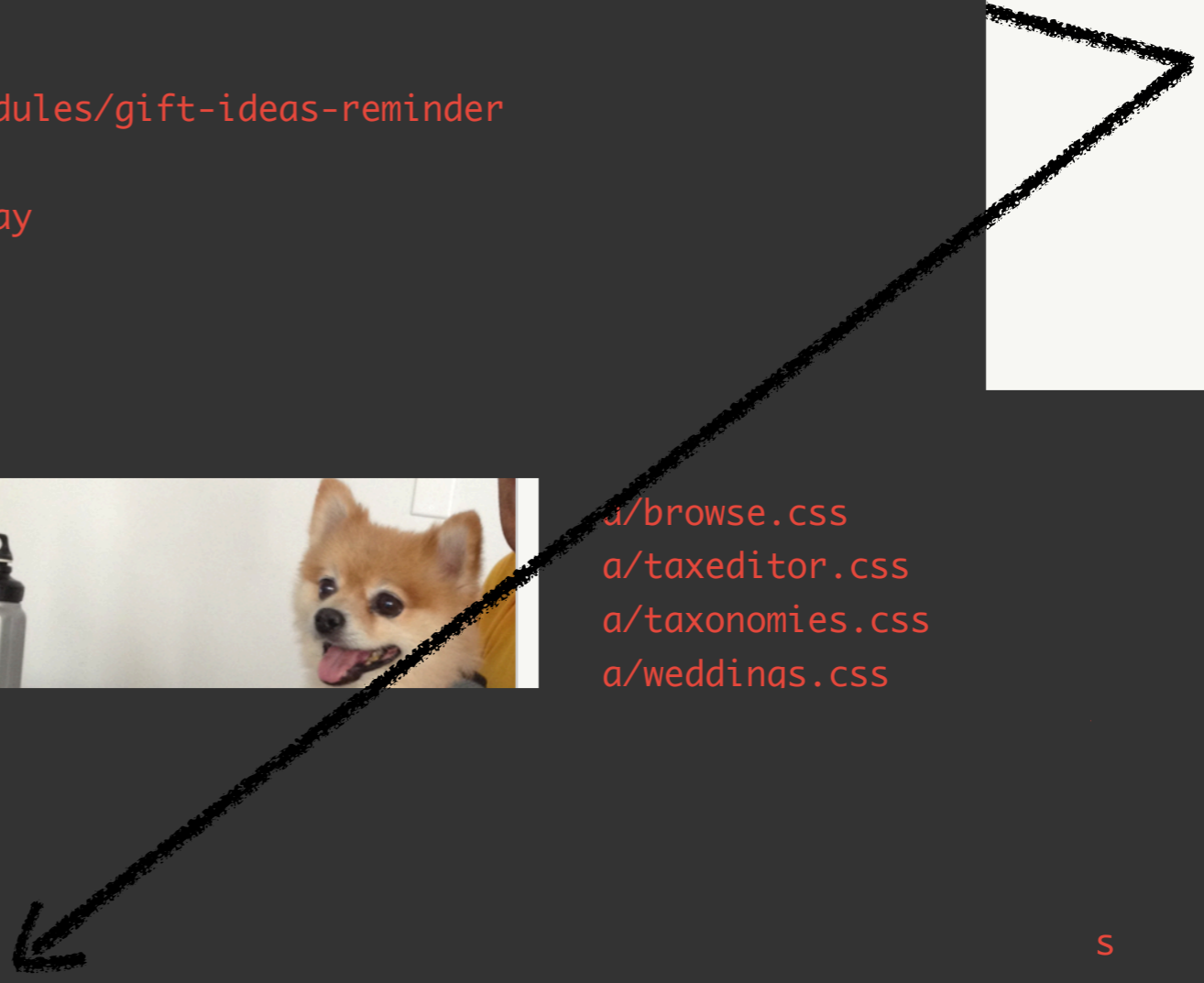


```
a/browse.css
a/taxeditor.css
a/taxonomies.css
a/weddings.css
```

```
wholes
c/t wholes
c/n wholes
a/s wholes
wholes
wholes
wholes
wholes
wholes
wholes
wholes
modules
base
```

```
Some/Controller/Class.php
Other/Controller/Class.php
Foo/Controller/Class.php
Bar/Controller/Class.php
Baz/Controller/Class.php
Batman/Controller/Class.php
...
```

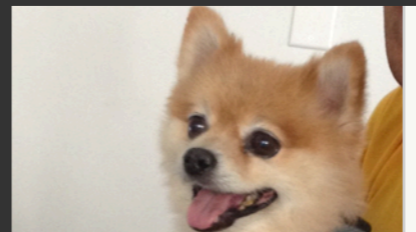
```
s
ing.css
```




```
modules/deferred_clientlogger
modules/jquery
modules/async_analytics_init
notice/experiment_notice
modules/locale/dismissible_link
pages/recommendations/friends/v2/modules/gift-ideas-reminder
header
pages/tran
modules/br
pages/brow
footer
```

```
/base-responsive
/base
/base_after_inline
```

```
htdocs/my_endpoint.php
htdocs/foo.php
htdocs/other_endpoint.php
htdocs/baz/index.php
htdocs/index.php
```



```
a/browse.css
a/taxeditor.css
a/taxonomies.css
a/weddinas.css
```

```
wholesc
c/t wholesc
c/n wholesc
a/s wholesc
wholesc
wholesc
wholesc
wholesc
wholesc
wholesc
wholesc
modules
base
```

```
Some/Controller/Class.php
Other/Controller/Class.php
Foo/Controller/Class.php
Bar/Controller/Class.php
Baz/Controller/Class.php
Batman/Controller/Class.php
...
```

```
s
ing.css
```

```

modules/deferred
modules/jquery
modules/async_ar
notice/experimen
modules/locale/c
pages/recommen
header
pages/tran
modules/br
pages/brow
footer

```

```

RewriteRule ^(.*)/ve/(.*)$ $1/voluntary-employee/$2 [L,R=301]
RewriteRule ^(.*)/hsa/(.*)$ $1/health-saving-account/$2 [L,R=301]
RewriteCond %{REQUEST_FILENAME} !-f # Existing File
RewriteCond %{REQUEST_FILENAME} !-d # Existing Directory
RewriteRule . /index.php [L]
RewriteCond %{HTTP_REFERER} !^$
RewriteCond %{HTTP_REFERER} !^http://(subdomain\.)?domain\.tld/.*$ [NC]
RewriteRule ^.*.(bmp|tif|gif|jpg|jpeg|jpe|png)$ - [F]

```

```

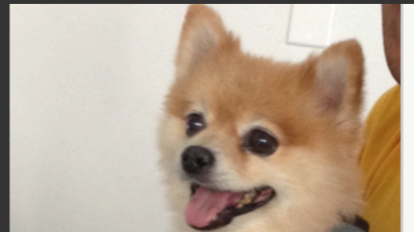
/base-responsive
/base
/base_after_inline

```

```

htdocs/other_endpoint.php
htdocs/baz/index.php
htdocs/index.php

```



```

a/browse.css
a/taxeditor.css
a/taxonomies.css
a/weddinas.css

```

```

wholesc
c/t wholesc
c/n wholesc
a/s wholesc
wholesc
wholesc
wholesc
wholesc
wholesc
wholesc
wholesc
modules
base

```

```

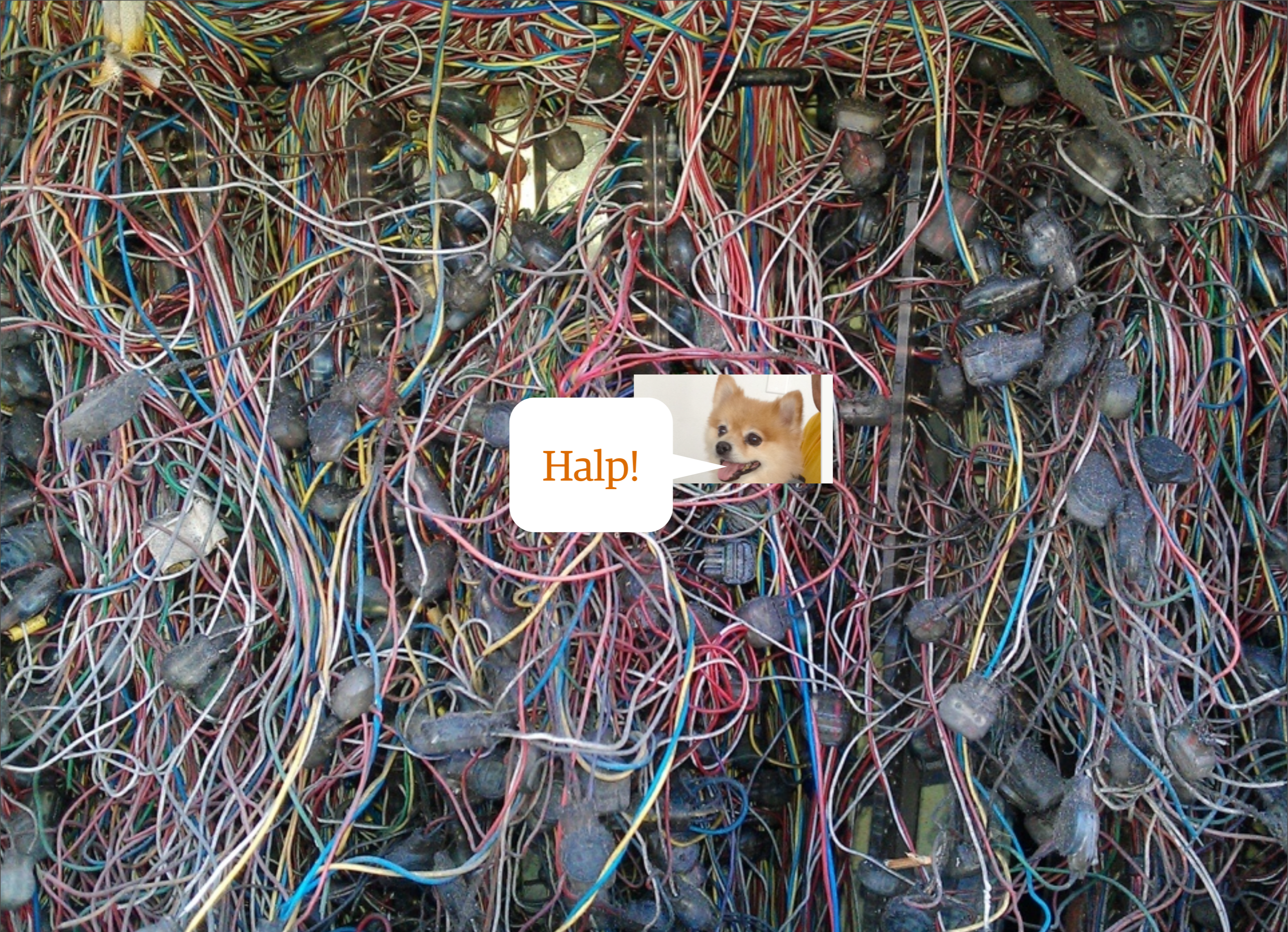
Some/Controller/Class.php
Other/Controller/Class.php
Foo/Controller/Class.php
Bar/Controller/Class.php
Baz/Controller/Class.php
Batman/Controller/Class.php
...

```

```

s
ing.css

```

Halp!

Reasoning about our
frontend is hard.

Etsy

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Deleting code is scary.

Etsy

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Testing changes is difficult.

Etsy

@danielespeset

Mental overhead is a
performance problem.

What are our options?

- Static Analysis
- Synthetic Testing
- Access Logs
- Dynamic Analysis

What are our options?

- Static Analysis
- Synthetic Testing
- Access Logs
- Dynamic Analysis

What are our options?

- ~~Static Analysis~~
- Synthetic Testing
- Access Logs
- Dynamic Analysis

What are our options?

- ~~Static Analysis~~
- ~~Synthetic Testing~~
- Access Logs
- Dynamic Analysis

What are our options?

- ~~Static Analysis~~
- ~~Synthetic Testing~~
- ~~Access Logs~~
- Dynamic Analysis

What are our options?

- ~~Static Analysis~~
- ~~Synthetic Testing~~
- ~~Access Logs~~
- Dynamic Analysis

Builda

A brief history of JS loading at Etsy

- `<script>`

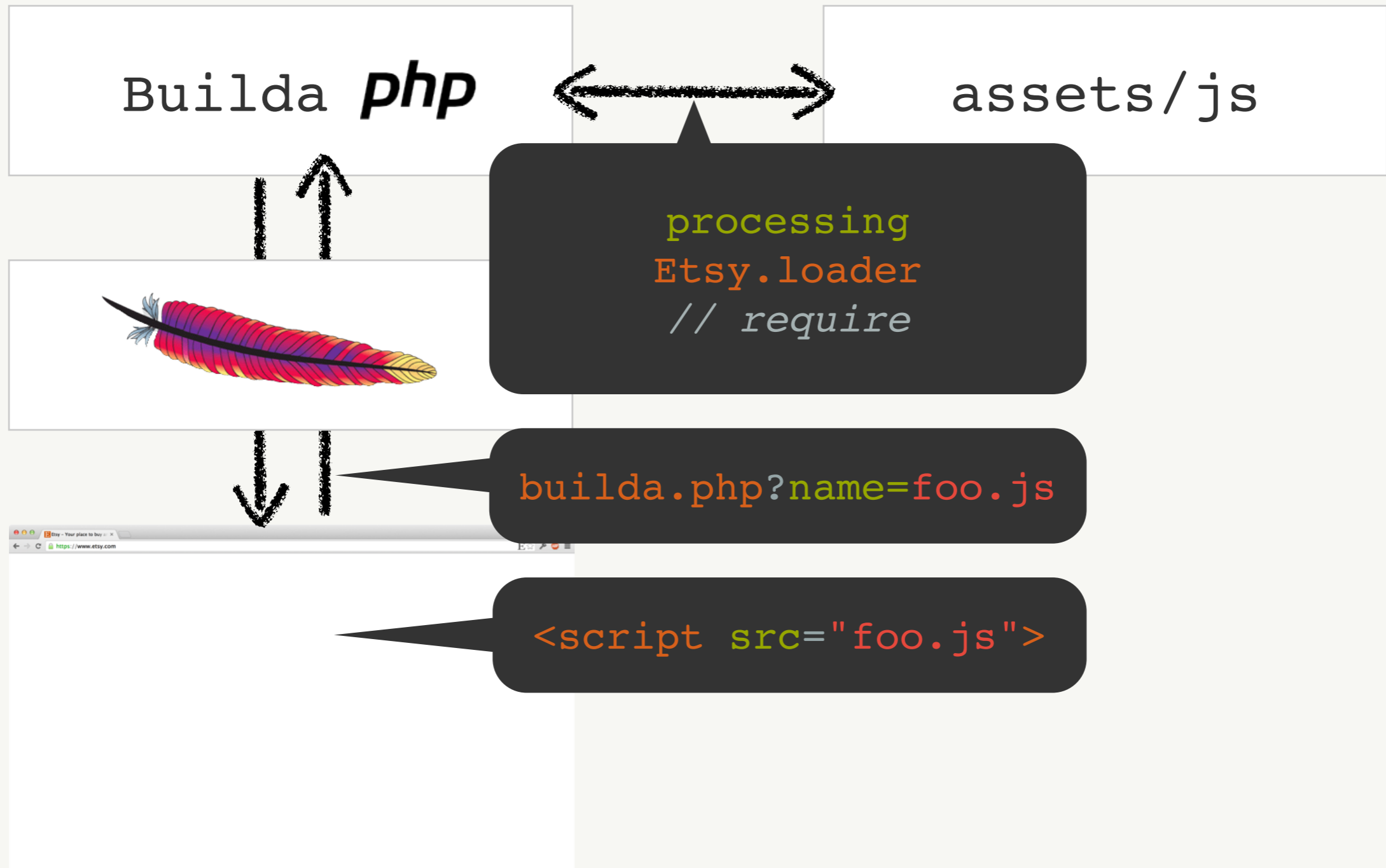
A brief history of JS loading at Etsy

- `<script>`
- `Etsy.loader`

A brief history of JS loading at Etsy

- `<script>`
- `Etsy.loader`
- `// = require`

Loading JS in development



Building JS in deploys

Builda *php*



bin/builda



The screenshot shows the Deployinator interface. At the top, it displays account information: 'Account: despetet logout', 'Deploy Host: deploy.etsy.com is up', and 'Stack: web'. The main area is titled 'Princess Deploy Log' and shows a list of deployment events. The most recent event is for the 'joh' service, which is currently in a 'Deploying' state. The logs show the execution of 'bin/builda' and the resulting deployment to production. The interface includes a 'Watch' button and a 'Deploy Logs' section with a table of deployment details.

Service	Time	Environment	Process	Old ID	New ID	Status	Log	Diff	Dashboard
web	2014-02-08 19:11:52	CONFIG	emurtagh	CONFIG PRODUCTION	Deploy: old dcd3c7095, new 99472e1d8	RUN LOG	DIFF	DASHBOARD	
web	2014-02-08 19:10:47	CONFIG	emurtagh	CONFIG Princess	Deploy: old dcd3c7095, new 99472e1d8	RUN LOG	DIFF	DASHBOARD	
web	2014-02-08 19:08:24	PRODUCTION	joclain	Production	Deploy: old e641877c14, new: 5c5477f16c1	RUN LOG	DIFF	DASHBOARD	
web	2014-02-08 19:07:08	CONFIG	bademan	CONFIG PRODUCTION	Deploy: old 481037b96f, new: dcd3c7095	RUN LOG	DIFF	DASHBOARD	
web	2014-02-08 19:03:37	PRINCESS	joclain	Princess	Deploy: old e641877c14, new: 5c5477f16c1	RUN LOG	DIFF	DASHBOARD	
web	2014-02-08 19:01:14	CONFIG	bademan	CONFIG Princess	Deploy: old 481037b96f, new: dcd3c7095	RUN LOG	DIFF	DASHBOARD	
web	2014-02-08 18:57:04	PRODUCTION	jaoung	Production	Deploy: old 256818216f, new: e641877c14	RUN LOG	DIFF	DASHBOARD	

Building JS in

processing
Etsy.loader
// require

Builda *php*

assets/js

compiled output

bin/builda

dist/js

The screenshot shows the Deployinator dashboard. At the top, it displays account information: 'Account: despetet logout', 'Deploy Host: deploy.etsy.com is up', and 'Stack: web'. The main content area is divided into several sections. On the left, there's a 'joh' section with a 'Watch' button and a '01. Save the Princess with Tests' section showing a 'Deploying' status. Below that is '02. Deploy to Production' with 'Tests are running' and a 'Deploy to Production' button. The right side features a 'Princess Deploy Log' with a scrollable log of deployment events, including timestamps and details like 'CONFIG PRODUCTION Deploy' and 'PRINCESS | prodman | Princess Deploy'. Below the log is a 'Deploy Logs' section with a table of deployment records.

Building JS in

processing
Etsy.loader
// require

Builda *php*

assets/js

compiled output

bin/builda

dist/js

The screenshot shows the Deployinator dashboard. At the top, it displays account information for 'despet' and the current deployment host 'deploy.etsy.com'. Below this, there are sections for 'Push topic', 'Princess Deploy Log', and 'Deploy Logs'. The 'Princess Deploy Log' section shows a list of deployment events with timestamps and status indicators (e.g., 'RUN LOG', 'DIFF', 'DASHBOARD'). The 'Deploy Logs' section shows a list of deployment events with timestamps and status indicators (e.g., 'RUN LOG', 'DIFF', 'DASHBOARD').

Building JS in

processing
Etsy.loader
// require

Builda *php*

assets/js

compiled output

bin/builda

dist/js

The screenshot shows the Deployinator dashboard. At the top, it displays account information: "Account: despiset logout", "Deploy Host: deploy.etsycorp.com is up", and "Stack: web". The main content area is divided into two columns. The left column shows a progress bar for a deployment, with a "Deploying" button and a "Tests are running" indicator. The right column displays a "Princess Deploy Log" with a scrollable list of log entries, including timestamps and command outputs. Below the log, there is a "Deploy Logs" section with a table of deployment records, including version numbers, deployment times, and status indicators like "RUN LOG", "DIFF", and "DASHBOARD".

Building JS in deploys



The screenshot shows the Deployinator web interface. At the top, it displays account information: "Account: despetet logout" and "Deploy Host: deploy.etsy.com is up". The main content area is divided into two columns. The left column shows a progress bar for a deployment, with a "Deploying" button and a "Tests are running" indicator. The right column displays a "Princess Deploy Log" with a terminal-style output of commands and their results, such as `npm install` and `npm run build`. Below the log, there is a "Deploy Logs" section with a table of recent deployments, including columns for time, environment, and status.

Building JS in deploys



The screenshot shows the Deployinator web interface. At the top, it displays account information: "Account: despetet logout", "Deploy Host: deploy.etsy.com is up", and "Stack: web". The Deployinator logo is prominently displayed. Below the header, there are several sections: a "Push topic" section with a "Watch" button, a "Princess Deploy Log" section showing a list of deployment events with timestamps and details, and a "Deploy Logs" section showing a list of deployment events with timestamps and details. The interface is clean and modern, with a focus on providing real-time feedback on deployment status.

Building JS in deploys

Builda *php*

assets/js

bin/builda

The screenshot shows the Deployinator dashboard. At the top, it displays account information: 'Account: despetet logout', 'Deploy Host: deploy.etsy.com is up', and 'Stack: web'. Below this, there are version details for 'Test', 'Prinoss', and 'Production'. The main area is divided into two columns. The left column shows a 'jsh' status with 'up tests are running - 45s since 2:12' and two tasks: '01. Save the Princess with Tests' (status: Deploying) and '02. Deploy to Production' (status: Tests are running). The right column shows a 'Princess Deploy Log' with a terminal-style output of commands and their results, and a 'Deploy Logs' table with columns for time, environment, and status.

dist/js

WWW

A brief history of JS loading at Etsy

- `<script>`
- `Etsy.loader`
- `///
require`
- **AMD (requirejs)**

Asynchronous Module Definition

lightsaber.js

```
define(function() {  
    return function Lightsaber(color) {  
        this.color = color;  
    };  
});
```

lightsaber.js

```
define(function() {  
    return function Lightsaber(color) {  
        this.color = color;  
    };  
});
```

luke.js

```
define(['lightsaber'], function(Lightsaber) {  
    return function Luke() {  
        this.lightsaber = new Lightsaber('green');  
    };  
});
```

lightsaber.js

```
define(function() {  
    return function Lightsaber(color) {  
        this.color = color;  
    };  
});
```

luke.js

```
define(['lightsaber'], function(Lightsaber) {  
    return function Luke() {  
        this.lightsaber = new Lightsaber('green');  
    };  
});
```

starwars.js

```
require(['plot', 'luke', 'vader'], function(plot, Luke,  
Vader) {  
    var luke = new Luke(),  
        vader = new Vader();  
    plot.exploreFatherIssues(luke, vader);  
});
```

Async loading AMD in development

lightsaber.js

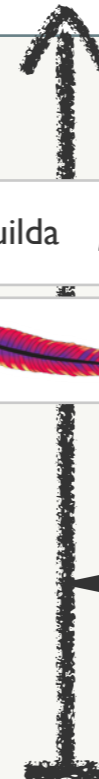
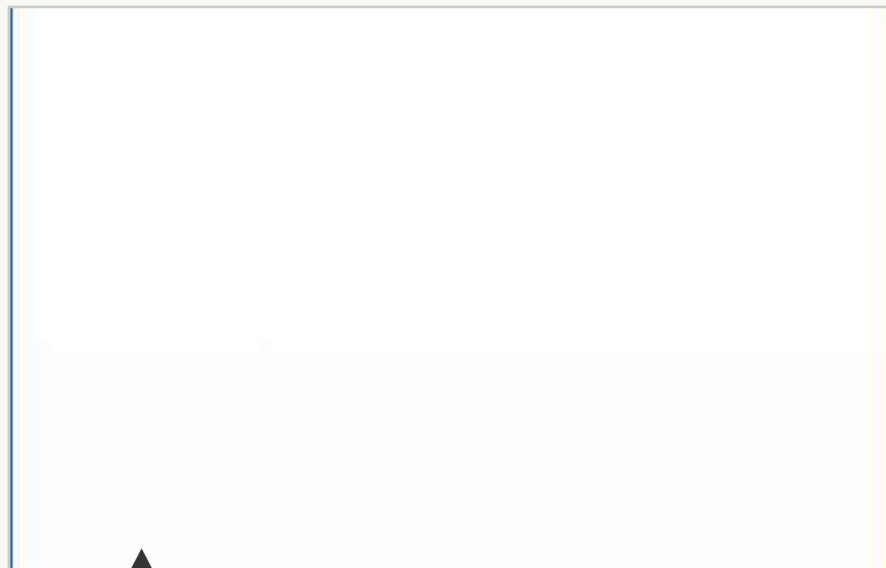
```
define(function() {  
  return function Lightsaber(color) {  
    this.color = color;  
  };  
});
```

luke.js

```
define(['lightsaber'], function(Lightsaber) {  
  return function Luke() {  
    this.lightsaber = new Lightsaber('green');  
  };  
});
```

starwars.js

```
require(['plot', 'luke', 'vader'], function(plot, Luke, Vader) {  
  var luke = new Luke(),  
      vader = new Vader();  
  plot.exploreFatherIssues(luke, vader);  
});
```



HTTP GET starwars.js

```
<script type="text/javascript" src="starwars.js"></script>
```

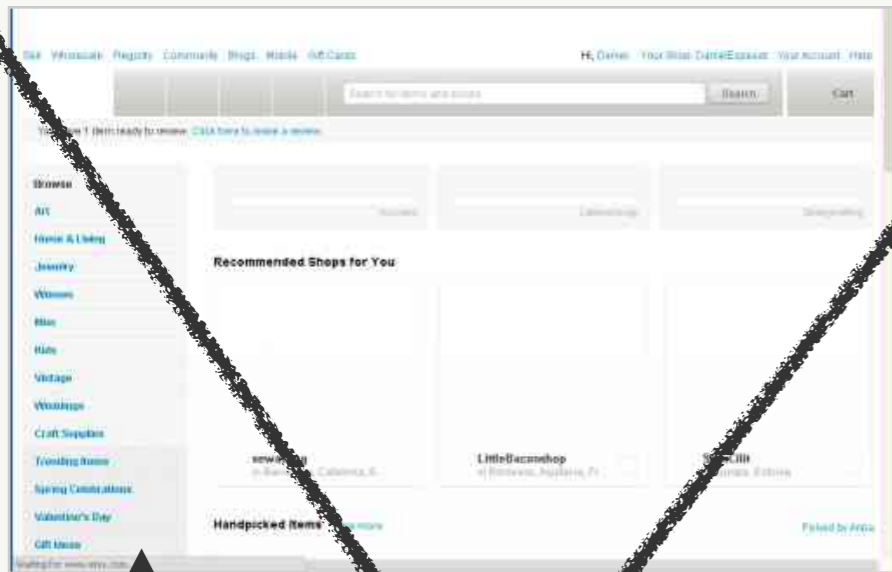
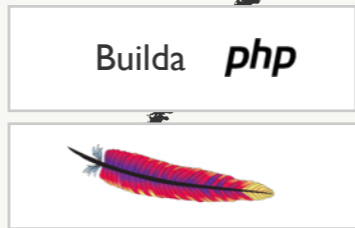
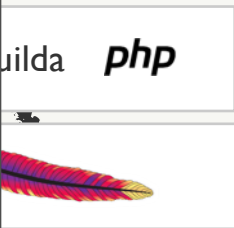
Async loading AMD in development

lightsaber.js

```
define(function() {  
  return function Lightsaber(color) {  
    this.color = color;  
  };  
});
```

luke.js

```
define(['lightsaber'], function(Lightsaber) {  
  return function Luke() {  
    this.lightsaber = new Lightsaber('green');  
  };  
});
```



HTTP GET luke.js

```
require(['plot', 'luke', 'vader'], function(plot, Luke, Vader) {
```

Etsy

@danielespeset

Async loading AMD in development

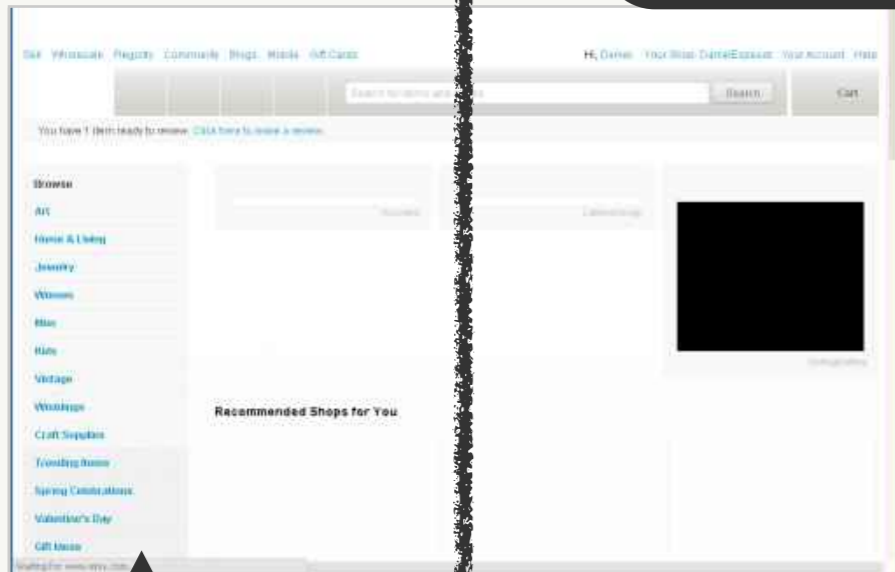
lightsaber.js

```
define(function() {  
  return function Lightsaber(color) {  
    this.color = color;  
  };  
});
```

Builda *php*



HTTP GET lightsaber.js

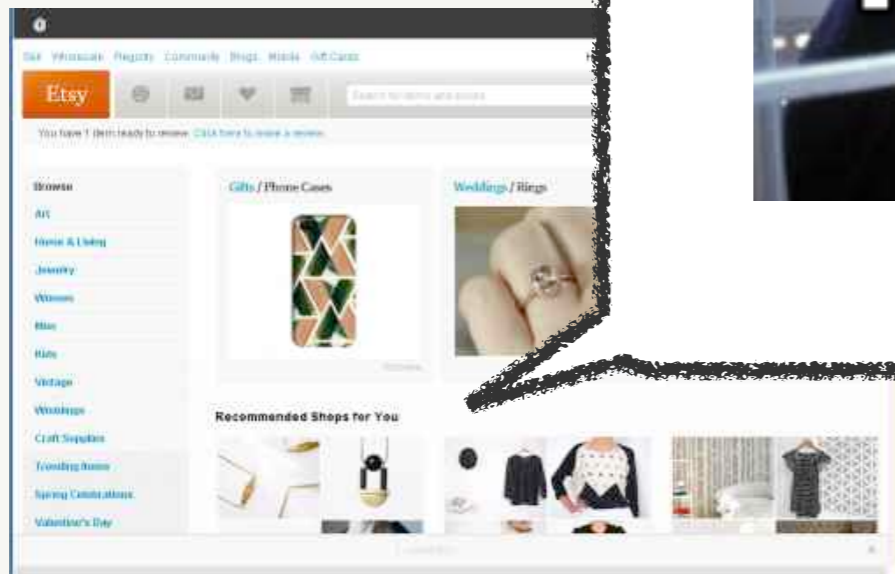
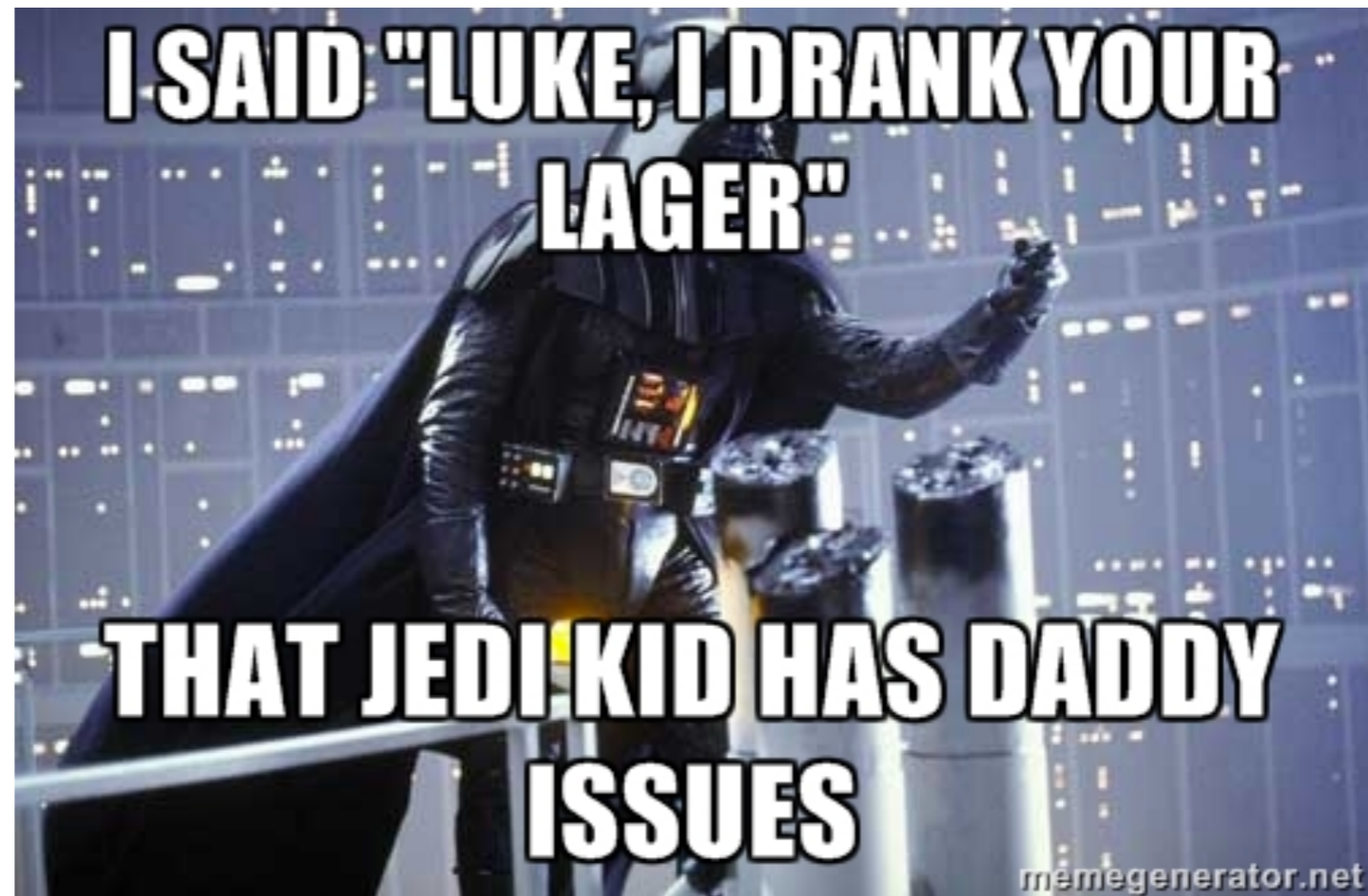


```
define(['lightsaber'], function(Lightsaber) {
```

Etsy

@danielespeset

Async loading

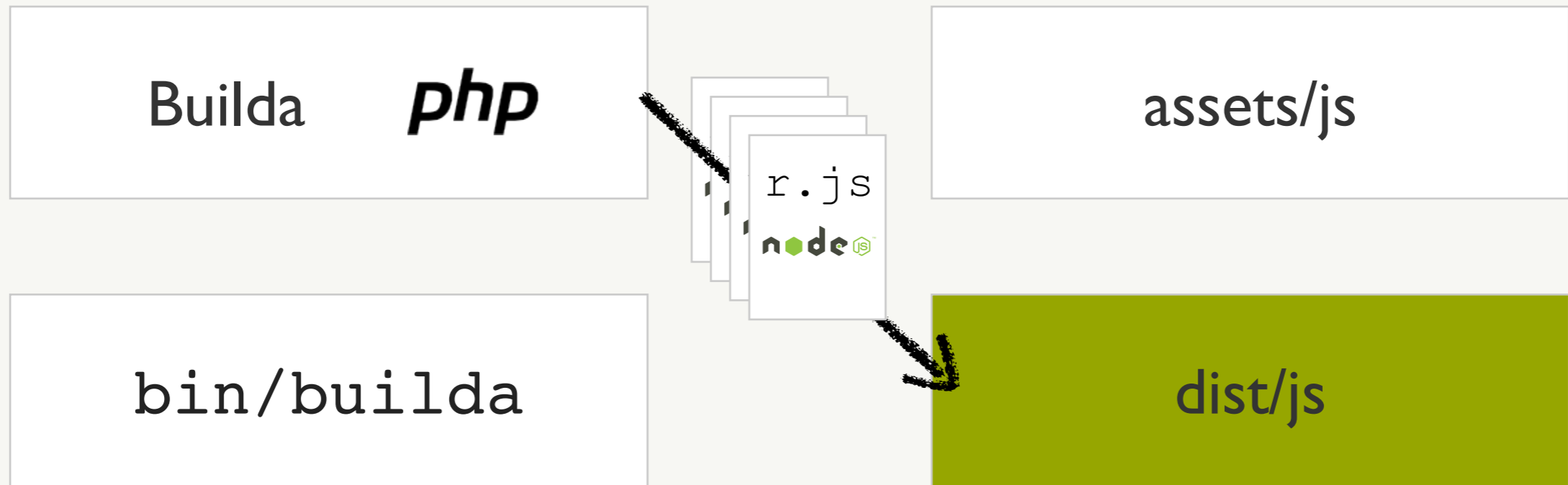


Etsy

@danielespeset

Incorporating **AMD** into Builda, phase 1

Building JS with AMD in deploys



The screenshot shows the Deployinator web interface. At the top, it displays account information: "Account: despiset logout", "Deploy Host: deploy.etsycorp.com is up", and "Stack: web". The Deployinator logo is visible in the top right. Below the account info, there are tabs for "jsh" and "Princess Deploy Log". The "jsh" tab shows a progress bar and the text "01. Save the Princess with Tests" and "02. Deploy to Production". The "Princess Deploy Log" tab shows a list of deployment logs with columns for "web", "web_config", and "web". The logs include timestamps and deployment details.

lightsaber.js

```
define(function() {  
    return function Lightsaber(color) {  
        this.color = color;  
    };  
});
```

luke.js

```
define(['lightsaber'], function(Lightsaber) {  
    return function Luke() {  
        this.lightsaber = new Lightsaber('green');  
    };  
});
```

starwars.js

```
require(['plot', 'luke', 'vader'], function(plot, Luke,  
Vader) {  
    var luke = new Luke(),  
        vader = new Vader();  
    plot.exploreFatherIssues(luke, vader);  
});
```

starwars.12345678901234.js

```
define('lightsaber', function() {
  return function Lightsaber(color) {
    this.color = color;
  };
});

// more modules...

define('luke', ['lightsaber'], function(Lightsaber) {
  return function Luke() {
    this.lightsaber = new Lightsaber('green');
  };
});

// more modules...

require(['plot', 'luke', 'vader'], function(plot, Luke,
Vader) {
  var luke = new Luke(),
      vader = new Vader();
  plot.exploreFatherIssues(luke, vader);
});
```

This broke dev-prod
environment parity

Also it was crazy slow

Builda Revised

AKA taking the
A out of AMD

Etsy

@danielespeset

Building JS in development



Building JS in development

dist/js

Build with 

`inotify`
`IN_CLOSE_WRITE`
`foo.js`

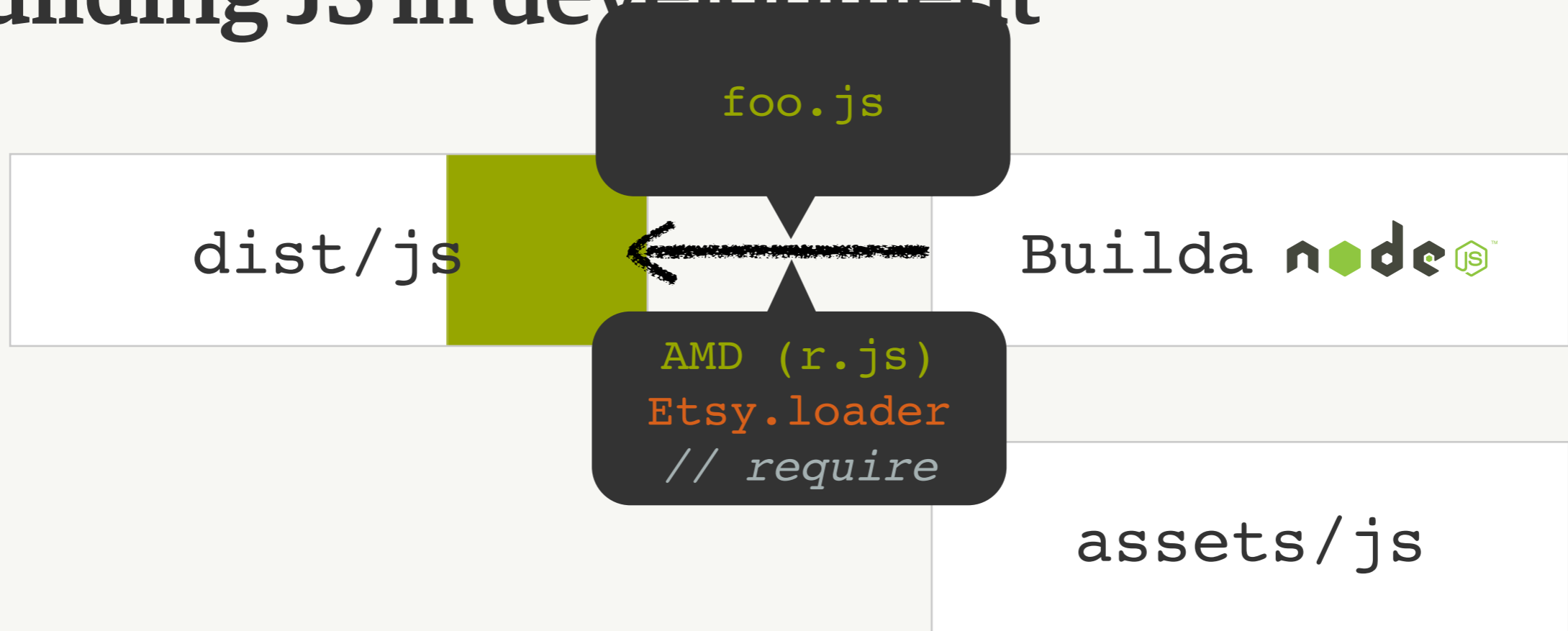
assets/js

Save `foo.js`

```
"foo" {  
  "dependency_of": ["bar", "baz"]  
}
```

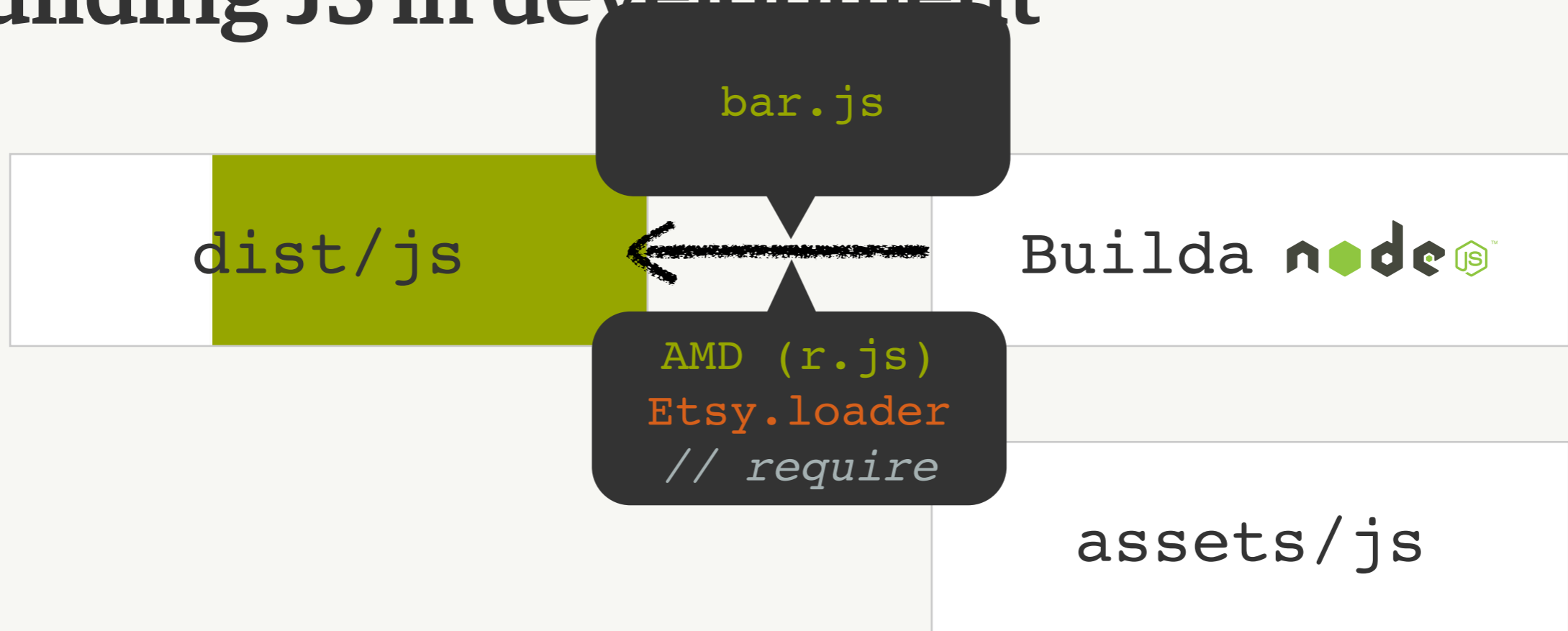
```
0 // require bar.js  
1 // require baz.js  
2  
3 (function() {  
4   var bar = Etsy.bar.init();  
5   var baz = Etsy.baz.init();  
6   // ...  
7 })();  
8  
9  
10 (function() {  
11   window.Etsy.bar = { init: function() {} };  
12 })();  
13  
14 (function() {  
15   window.Etsy.baz = { init: function() {} };  
16 })();  
17  
18 (function() {  
19   var bar = Etsy.bar.init();  
20   var baz = Etsy.baz.init();  
21   // ...  
22 })();  
-
```

Building JS in development



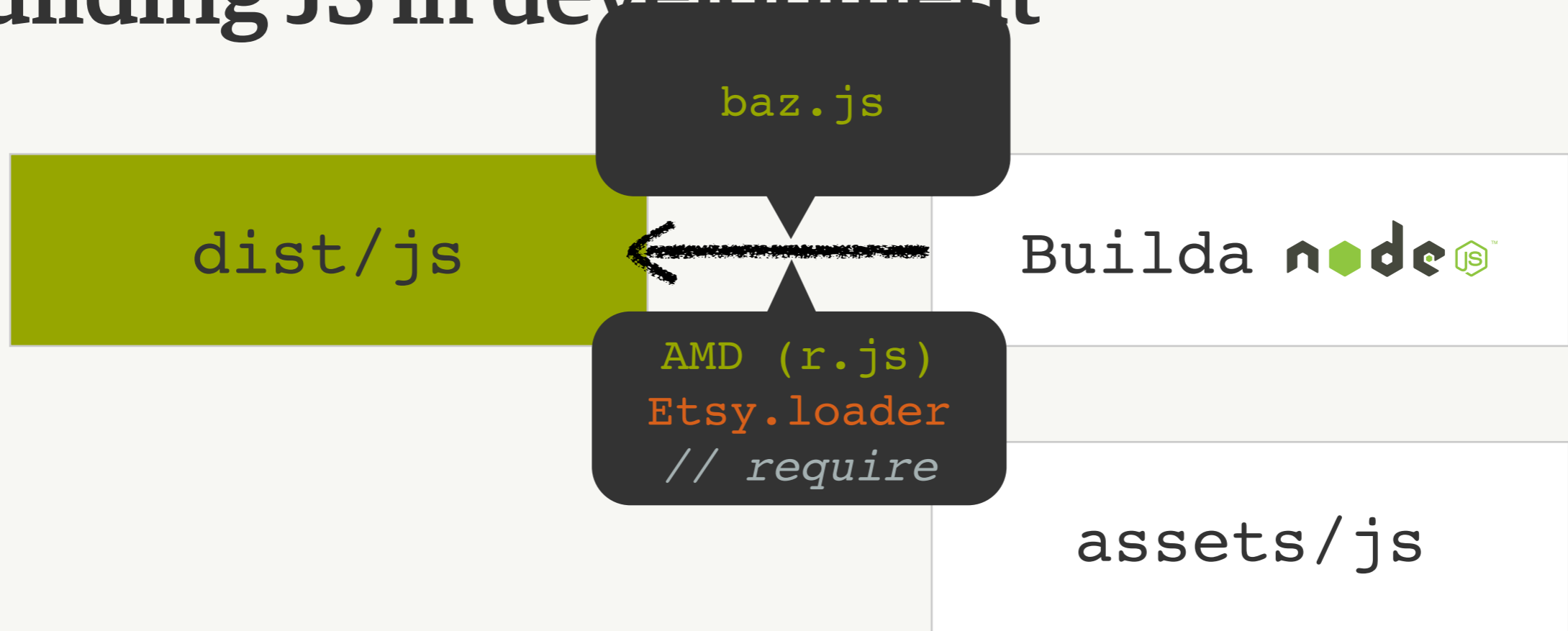
```
0 // require bar.js
1 // require baz.js
2
3 (function() {
4   var bar = Etsy.bar.init();
5   var baz = Etsy.baz.init();
6   // ...
7 })();
8
9
10 (function() {
11   window.Etsy.bar = { init: function() {} };
12 })();
13
14 (function() {
15   window.Etsy.baz = { init: function() {} };
16 })();
17
18 (function() {
19   var bar = Etsy.bar.init();
20   var baz = Etsy.baz.init();
21   // ...
22 })();
-
```

Building JS in development



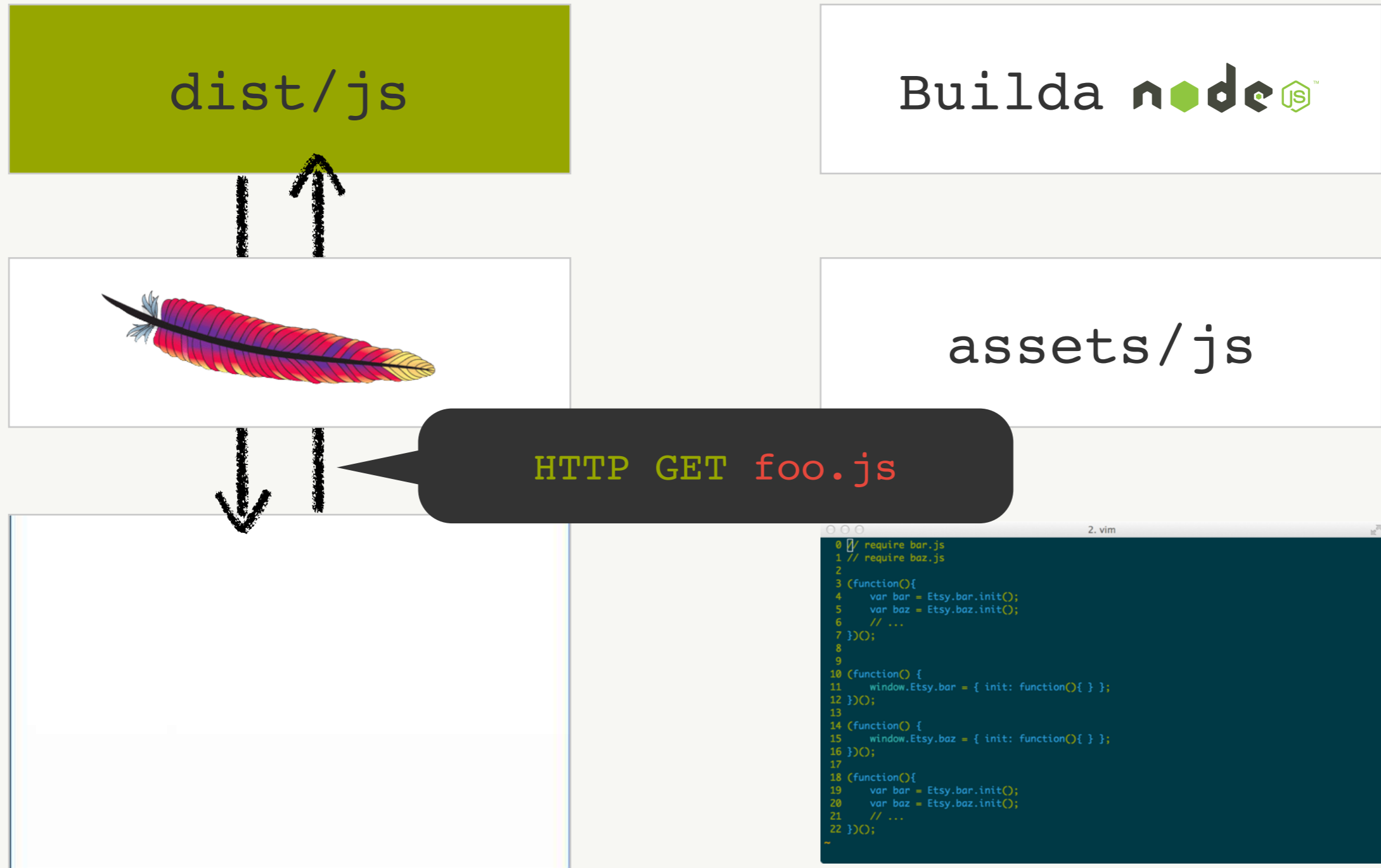
```
0 // require bar.js
1 // require baz.js
2
3 (function() {
4   var bar = Etsy.bar.init();
5   var baz = Etsy.baz.init();
6   // ...
7 })();
8
9
10 (function() {
11   window.Etsy.bar = { init: function() {} };
12 })();
13
14 (function() {
15   window.Etsy.baz = { init: function() {} };
16 })();
17
18 (function() {
19   var bar = Etsy.bar.init();
20   var baz = Etsy.baz.init();
21   // ...
22 })();
-
```

Building JS in development



```
0 // require bar.js
1 // require baz.js
2
3 (function() {
4   var bar = Etsy.bar.init();
5   var baz = Etsy.baz.init();
6   // ...
7 })();
8
9
10 (function() {
11   window.Etsy.bar = { init: function() {} };
12 })();
13
14 (function() {
15   window.Etsy.baz = { init: function() {} };
16 })();
17
18 (function() {
19   var bar = Etsy.bar.init();
20   var baz = Etsy.baz.init();
21   // ...
22 })();
-
```

Building JS in development



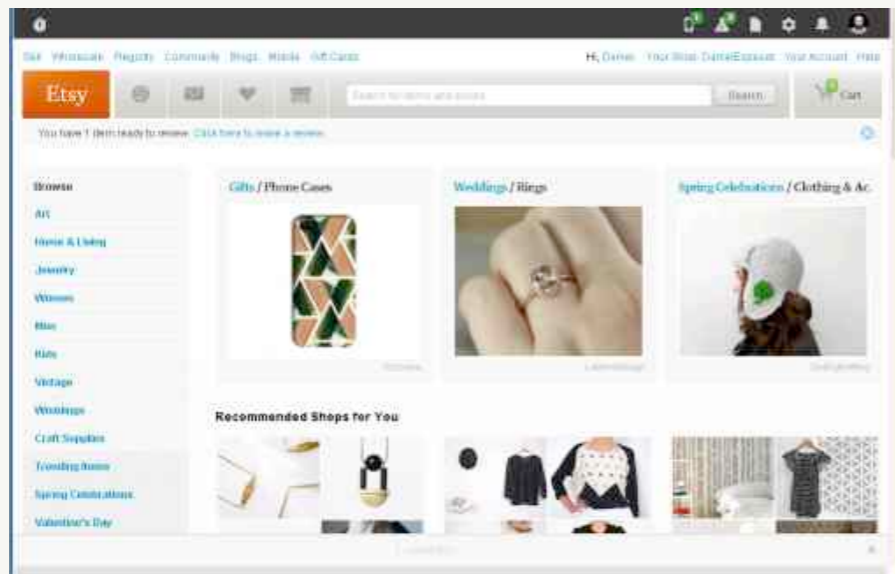
Building JS in development

dist/js

Builda 



assets/js



```
2. vim
0 // require bar.js
1 // require baz.js
2
3 (function() {
4   var bar = Etsy.bar.init();
5   var baz = Etsy.baz.init();
6   // ...
7 })();
8
9
10 (function() {
11   window.Etsy.bar = { init: function() {} };
12 })();
13
14 (function() {
15   window.Etsy.baz = { init: function() {} };
16 })();
17
18 (function() {
19   var bar = Etsy.bar.init();
20   var baz = Etsy.baz.init();
21   // ...
22 })();
-
```

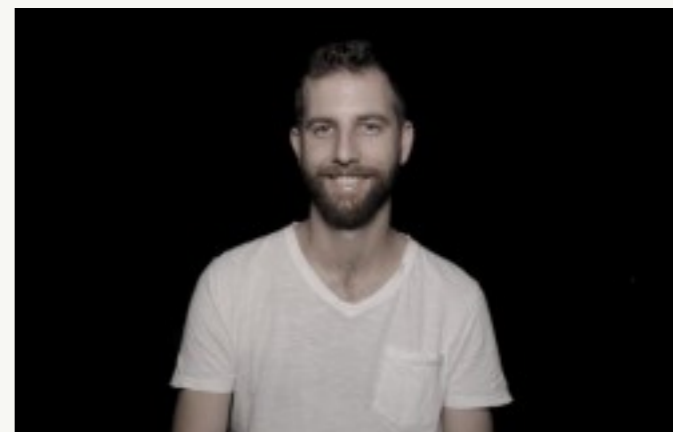
Etsy

@danielespeset

Ranger



Jason Huff
[@jsnhff](#)

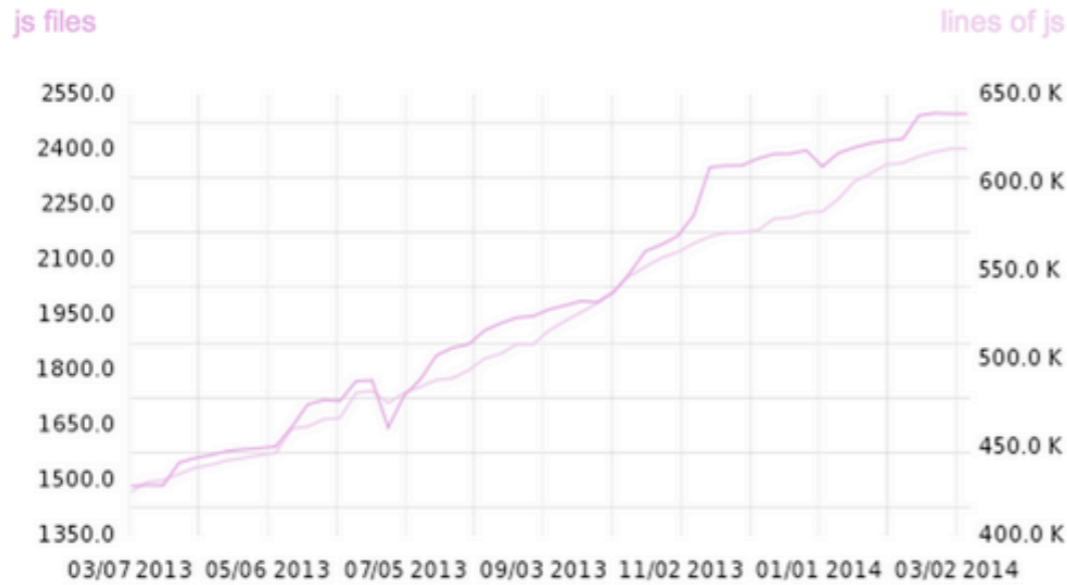


Aaron Moodie
[@aaronmoodie](#)

Etsy

[@danielespeset](#)

JavaScript growth (1 year)



last year

1,469 files
428,283 lines

this week

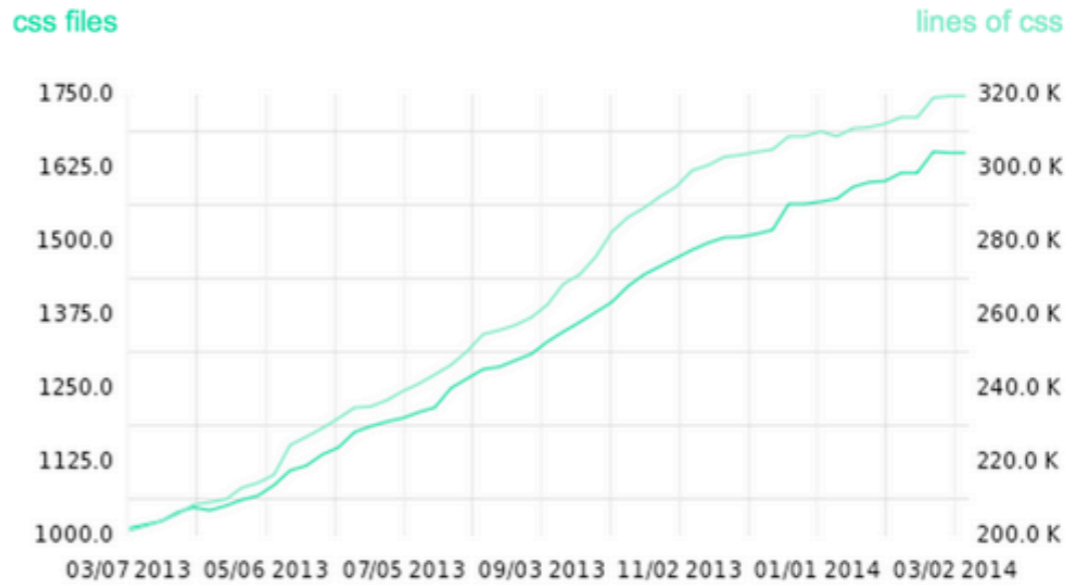
2,403 files (1.64x)
639,162 lines (1.49x)

Total CSSLint Warnings: 3696

Worst Files

File	# Warnings
atlas/meteor/canvas/newsletter_responsive.css	69

CSS growth (1 year)



last year

1,013 files
201,357 lines

this week

1,651 files (1.63x)
319,613 lines (1.59x)

CSS

Etsy

@danielespeset

modules/buttons.css

TOTAL SELECTORS 159	DEFINED SELECTORS 159	IMPORTED SELECTORS 0	IMPORTED FILES 0
-------------------------------	---------------------------------	--------------------------------	----------------------------



jklein / 6 months ago

fa9ad02

PERF-433 Fixing the follow link on the sent conversations page

CSSLint Warnings **32**

Line

Outlines should only be modified using :focus.	13
Use of !important	49
Use of !important	50
float can't be used with display: inline-block.	63
Use of !important	70
Use of !important	85
Outlines should only be modified using :focus.	230
Outlines shouldn't be hidden unless other visual changes are made.	269
Background image '/images/sprites/buttons-master.png' was used multiple times, first declared at line 21, col 5.	284
Use of !important	313

Pages 310

[index](#) → base → base/modules → modules/buttons[listing](#) → base → base/modules → modules/buttons[cart/index](#) → base → base/modules → modules/buttons[sell](#) → base → base/modules → modules/buttons[registry/index](#) → base → base/modules → modules/buttons[registry/search](#) → base → base/modules → modules/buttons[registry/view](#) → base → base/modules → modules/buttons[browse](#) → base → base/modules → modules/buttons[shop/available](#) → base → base/modules → modules/buttons[your/shops/dashboard](#) → base → base/modules → modules/buttons[your/shops/stats/overview](#) → base → base/modules → modules/buttons[your/shops/about/about](#) → base → base/modules → modules/buttons[your/shops/appearance](#) → base → base/modules → modules/buttons[your/shops/manufacturing/edit](#) → base → base/modules → modules/buttons[your/shops/policies](#) → base → base/modules → modules/buttons[your/shops/name](#) → base → base/modules → modules/buttons[your/shops/languages](#) → base → base/modules → modules/buttons[your/shops/payments](#) → base → base/modules → modules/buttons[your/shops/success-steps](#) → base → base/modules → modules/buttons

Parents 19	Depth
base-responsive	2
base	2
base_after_inline	2
base/modules-responsive	1
base/modules	1
atlas/browse	1
atlas/taxeditor	1
atlas/taxonomies	1
atlas/weddings	1
custshops/template_editor	3
your/mini	3
atlas/orders/refund	1
atlas/scout/dashboard	3
atlas/scout/scout	1
your/account/credit-card	1
your/bill/autobilling	1
your/bill/index	1
your/bill/payments	1
your/shop/registration/billing	1

Pages

Etsy

@danielespeset

teams/list.php

Stylesheets

email-signup-panel.css

↳ homepage/_modules/homepage-layout.css

↳ modules/layout.css

↳ modules/panels.css

↳ modules/forms.css

↳ modules/form-saver.css

↳ modules/typography.css

staleness.css

modules/search-header.css

staleness.css

base.css

↳ base/modules.css

↳ modules/overlay.css

↳ modules/currency-selector.css

↳ modules/messages.css

↳ fonts/ss-standard.css

↳ modules/tabs.css

JavaScripts

bootstrap/email-landing-page.js

↳ etsy.email-list-signup.js

↳ staleness.js

base.js

↳ common/etsy.loader.js

↳ common/etsy.sendreport.js

↳ common/etsy.namespace.js

↳ common/etsy.template.js

↳ common/etsy.topic.js

↳ common/etsy.eventlogger.js

↳ util/random.js

↳ common/etsy.ga.js

↳ common/etsy.framelogger.js

↳ common/etsy.orientation-event.js

↳ jquery.util.js

↳ json2.js

↳ lib/underscore.js

↳ common/etsy.logger.js

↳ common/etsy.context.js

JavaScript

Etsy

@danielespeset

shop.rearrange.js



Chris Fairbanks / 1 year, 3 months ago

9050bc7

```
fix ie8 bug with rearrange your shop and window.onbeforeunload
```

JSHint Warnings **7**

	Line
Variables should not be deleted.	445
Bad escaping of EOL. Use option multistr if needed.	654
Bad escaping of EOL. Use option multistr if needed.	655
Bad escaping of EOL. Use option multistr if needed.	656
Bad escaping of EOL. Use option multistr if needed.	657
Bad escaping of EOL. Use option multistr if needed.	658
Bad escaping of EOL. Use option multistr if needed.	659

Code Complexity

	Value
Physical Lines	703
Logical Lines	414
Cyclomatic Complexity (lower is better)	47
Maintainability Index (-infinity to 171, higher is better)	110.82

Bad escaping of EOL. Use option multistr if needed.

659

Code Complexity**Value**

Physical Lines

703

Logical Lines

414

Cyclomatic Complexity (lower is better)

47

Maintainability Index (-infinity to 171, higher is better)

110.82

Pages 1[shop/rearrange](#) → shop.rearrange**Dependants 6****Type**

jquery-ui/jquery.ui.core

sprockets

jquery-ui/jquery.ui.widget

sprockets

jquery-ui/jquery.ui.mouse

sprockets

jquery-ui/jquery.ui.sortable

sprockets

etsy.humanmessage

sprockets

etsy.paginator

sprockets

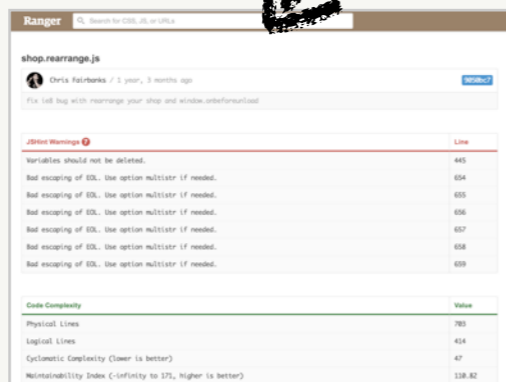
Ranger is an API
Lodge is a client

Ranger 

Etsy

@danielespeset

Ranger



shop.rearrange.js

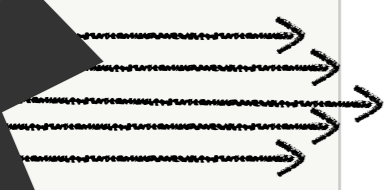
Chris Fairbanks / 1 year, 3 months ago

Fix: Add flag with rearrange your shop and window.onbeforeunload

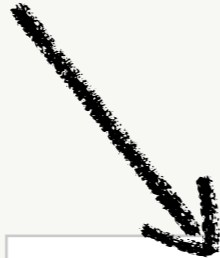
JSHint Warnings	Line
Variables should not be deleted.	445
Bad escaping of EOL. The option multipler is needed.	454
Bad escaping of EOL. The option multipler is needed.	455
Bad escaping of EOL. The option multipler is needed.	456
Bad escaping of EOL. The option multipler is needed.	457
Bad escaping of EOL. The option multipler is needed.	458
Bad escaping of EOL. The option multipler is needed.	459

Code Complexity	Value
Physical Lines	783
Logical Lines	414
Cyclomatic Complexity (lower is better)	47
Maintainability Index C-infinity to 10, higher is better	118.82

```
0 // require bar.js
1 // require baz.js
2
3 (function() {
4   var bar = Etsy.bar.init();
5   var baz = Etsy.baz.init();
6   // ...
7 })();
8
9
10 (function() {
11   window.Etsy.bar = { init: function() {} };
12 })();
13
14 (function() {
15   window.Etsy.baz = { init: function() {} };
16 })();
17
18 (function() {
19   var bar = Etsy.bar.init();
20   var baz = Etsy.baz.init();
21   // ...
22 })();
23
```

log host



Ranger 



shop.rearrange.js

Chris Patrbanke / 1 year, 3 months ago

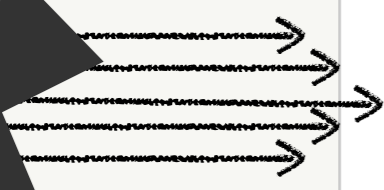
Fix: Add flag with rearrange your shop and window.onbeforeunload

JSHint Warnings	Line
Variables should not be deleted.	445
Bad escaping of EOL. the option multipler if needed.	454
Bad escaping of EOL. the option multipler if needed.	455
Bad escaping of EOL. the option multipler if needed.	456
Bad escaping of EOL. the option multipler if needed.	457
Bad escaping of EOL. the option multipler if needed.	458
Bad escaping of EOL. the option multipler if needed.	459

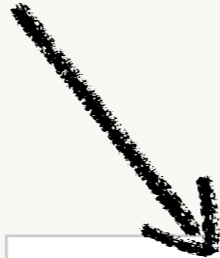
Code Complexity	Value
Physical Lines	783
Logical Lines	414
Cyclomatic Complexity (lower is better)	47
Maintainability Index C-infinity to 10, Higher is better	118.82

```
0 // require bar.js
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12 })();
13
14 (function() {
15   window.Etsy.baz = { init: function() {} };
16 })();
17
18 (function() {
19   var bar = Etsy.bar.init();
20   var baz = Etsy.baz.init();
21   // ...
22 })();
23
```

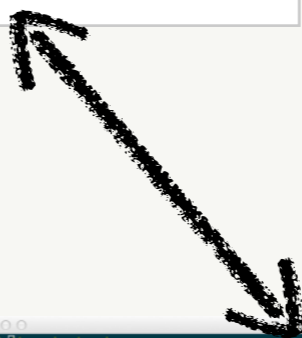




log host



Ranger 



shop.rearrange.js

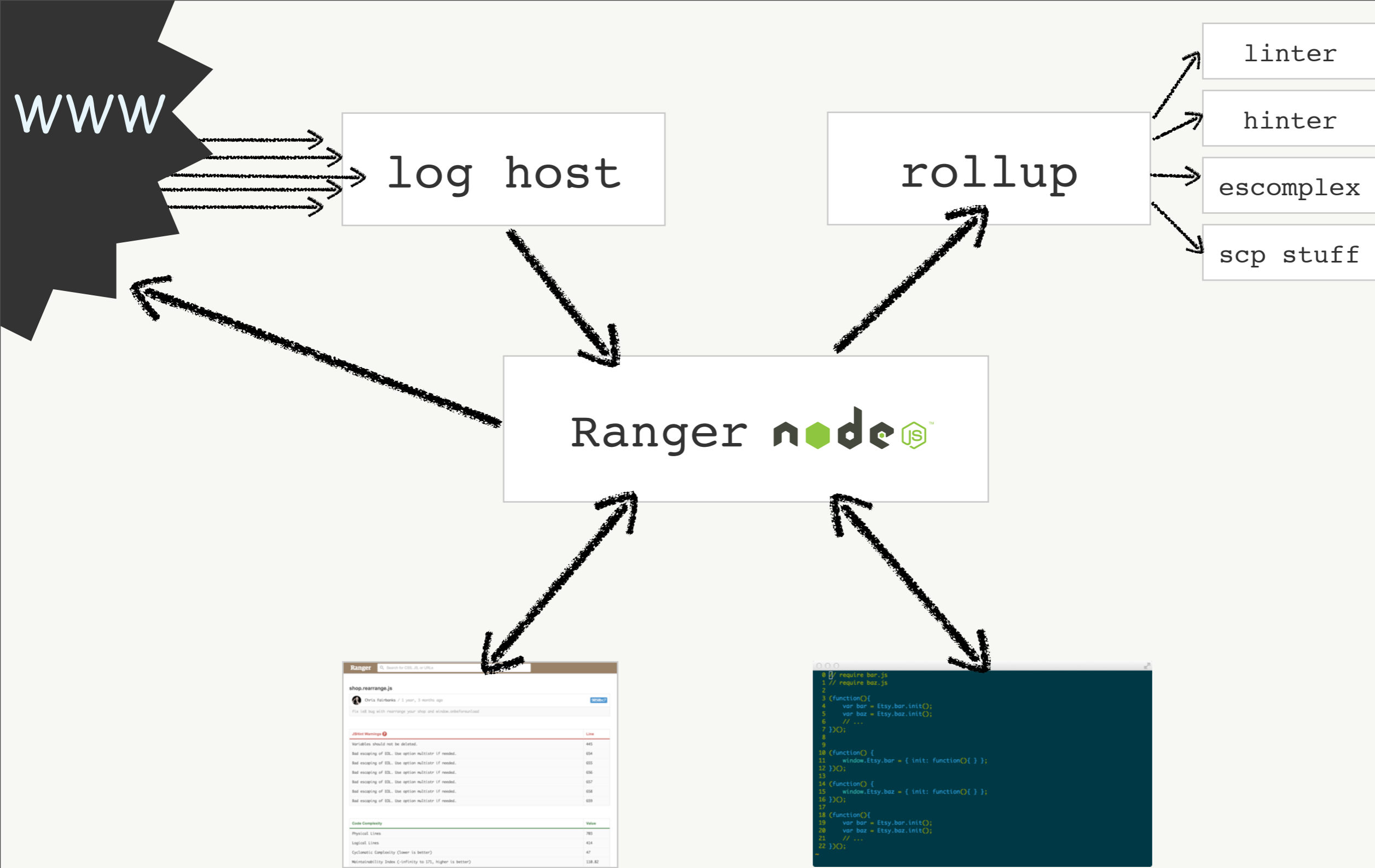
Chris Patrbanke / 1 year, 3 months ago

Fix: Add flag with rearrange your shop and window.onbeforeunload

JSHint Warnings	
	Line
Variables should not be deleted.	445
Bad escaping of EOL. The option multiplier is needed.	454
Bad escaping of EOL. The option multiplier is needed.	455
Bad escaping of EOL. The option multiplier is needed.	456
Bad escaping of EOL. The option multiplier is needed.	457
Bad escaping of EOL. The option multiplier is needed.	458
Bad escaping of EOL. The option multiplier is needed.	459

Code Complexity	
	Value
Physical Lines	783
Logical Lines	414
Cyclomatic Complexity (lower is better)	47
Maintainability Index C-infinity to 10, higher is better	118.82

```
0 // require bar.js
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2
3 (function() {
4   var bar = Etsy.bar.init();
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6   // ...
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8
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11   window.Etsy.bar = { init: function() {} };
12 })();
13
14 (function() {
15   window.Etsy.baz = { init: function() {} };
16 })();
17
18 (function() {
19   var bar = Etsy.bar.init();
20   var baz = Etsy.baz.init();
21   // ...
22 })();
23
```





log host

rollup

Ranger 

- linter
- hinter
- escomplex
- scp stuff

Ranger

shop.rearrange.js

Chris Patranks / 1 year, 3 months ago

Fix 1st bug with rearrange your shop and window.onload

JSHint Warnings	Line
Variables should not be deleted.	445
Bad escaping of EOL. the option multiplier is needed.	454
Bad escaping of EOL. the option multiplier is needed.	455
Bad escaping of EOL. the option multiplier is needed.	456
Bad escaping of EOL. the option multiplier is needed.	457
Bad escaping of EOL. the option multiplier is needed.	458
Bad escaping of EOL. the option multiplier is needed.	459

Code Complexity	Value
Physical Lines	783
Logical Lines	414
Cyclomatic Complexity (lower is better)	47
Maintainability Index C-infinity to 175, higher is better	118.82

```

0 // require bar.js
1 // require baz.js
2
3 (function() {
4   var bar = Etsy.bar.init();
5   var baz = Etsy.baz.init();
6   // ...
7 })();
8
9
10 (function() {
11   window.Etsy.bar = { init: function() {} };
12 })();
13
14 (function() {
15   window.Etsy.baz = { init: function() {} };
16 })();
17
18 (function() {
19   var bar = Etsy.bar.init();
20   var baz = Etsy.baz.init();
21   // ...
22 })();
  
```

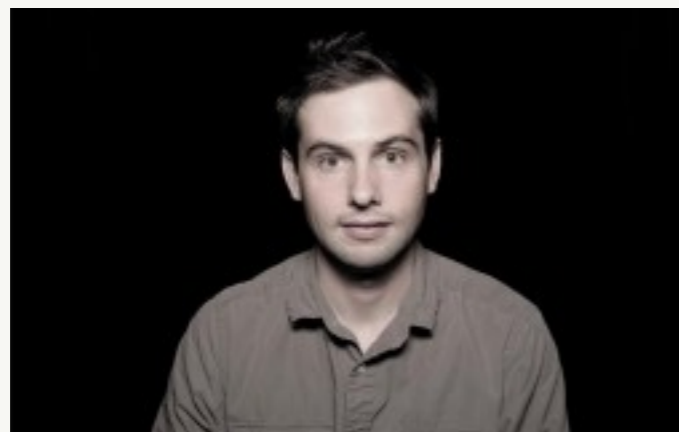
Now we know enough
to surface dead files
with confidence

Etsy

@danielespeset

Finding dead code paths
is still hard

Shrinkray



Justin Donato
[@justindo](#)



Kelly Norton
[@kellegous](#)

Etsy

[@danielespeset](#)

modules/buttons.css

TOTAL SELECTORS

159

DEFINED SELECTORS

159

IMPORTED SELECTORS

0

IMPORTED FILES

0



jklein / 5 months ago

fa9ad02

PERF-433 Fixing the follow link on the sent conversations page

Unused Selectors **112**

	Size	Line
.button-stack	302B	482
.tt-add-circle.tt.tt-mini .dismiss	217B	658
.button-stack span	198B	497
.tt-add-circle.tt.tt-mini	197B	644
.button-small-disabled	176B	107
.button-small-loading	175B	106
.add-to-circle-spinner	165B	617
.de .button-fave span	157B	340
.button-add	154B	766
.registry-button-container a.remove-from-registry	148B	382

What's next?

- Adding Templates as a resource

What's next?

- Adding Templates as a resource
- Shrinkray powered delete button

What's next?

- Adding Templates as a resource
- Shrinkray powered delete button
- Detecting inefficiently grouped code

What's next?

- Adding Templates as a resource
- Shrinkray powered delete button
- Detecting inefficiently grouped code
- Feature / User-state asset signatures

What's next?

- Adding Templates as a resource
- Shrinkray powered delete button
- Detecting inefficiently grouped code
- Feature / User-state asset signatures
- **Shrinkray for JavaScript**

The frontend is getting more
complex everywhere.

Etsy

@danielespeset

We need new strategies to
manage and understand it.

Etsy

@danielespeset

The browser is part of your distributed system, not just a client you support.

The more extensible a tool
the more useful it will be.

Etsy

@danielespeset

Thanks!



codeascraft.com

[@codeascraft](https://twitter.com/codeascraft)

etsy.github.io

etsy.com/codeascraft/talks

etsy.com/careers

Etsy

[@danielespeset](https://twitter.com/danielespeset)

Please evaluate
my talk via the
mobile app!