Good Morning.
Customers Hate Slow Websites
2% of them bounce after 1s
40% of them bounce after 2s
57% bounce after 3s
Customers show NO MERCY for slow websites
Loses 1% of sales per 100ms delay
Loses 5%-9% of traffic per 400ms delay
Loses 3% of traffic per 500ms delay
85% of mobile users expect same response time as desktop
An overly simplified graphic of a non-mobile web request
An overly simplified of a desktop web request

![Diagram of a laptop and DNS]

- Laptop
  - Arrow pointing to
  - DNS

---

**DNS**
An overly simplified of a desktop web request
These requests can take up to 200ms

You'll never get this back.
An overly simplified of a desktop web request
An overly simplified of a desktop web request
An overly simplified of a desktop web request
An overly simplified graphic of a mobile web request
An overly simplified of a desktop web request

The Tower
An overly simplified of a desktop web request

The Tower
All your latency belongs to the tower
An overly simplified of a desktop web request

The Tower

DNS
An overly simplified of a desktop web request

The Tower

DNS
These requests can take up to 200ms

You'll never get this back.
An overly simplified of a desktop web request
An overly simplified of a desktop web request

The Tower

DNS

Server
An overly simplified of a desktop web request
Average page is 1.4mb
jQuery
loads and processes in about 139ms
Zepto loads and processes in about 51ms
Bootstrap loads and processes in about 600ms

Don't forget jQuery
Choose your tax
These examples were performed under optimal conditions.
The “Golden Second” is aspirational.
We can always try our hardest and do our best.
How?
Lose 10ms with this one weird server trick.
Combine It,
Combine many CSS files into one “compressed”.
Develop a build process for JS to compress & minify
Combine images into sprites where possible.
Combine It,

Minimize It,
Combine It,
Minimize It,
GZIP it,
Combine It,
Minimize It,
GZIP it,
CDN it,
Some images do well as DATA-URI to help reduce HTTP requests.
Combine It, Minimize It, GZIP it, CDN it, Cache it.
Render fast, render often.
Limit blocking items early in the DOM.
Watch the dev tools
Reduce CSS,
Reduce CSS,

Offload to the server,
With media queries, we can right size images, CSS, Javascript.
Reduce CSS,
Offload to the server,
Unblock Javascript,
head.js("/path/to/jquery.js", function() {
    // all done
});
Your Javascript File

```javascript
$LAB.script("jquery.js").wait()
.script("jquery.ui.js")
```
YepNope.js

```javascript
YepNope([{
    test: 'SomeJSTestHere,
    yep: ['/js/javascriptYouNeed.js', '/css/CSSYouNeed.css'],
    nope: ['/js/maybeAPolyfillOrSomethingAlongThoseLines.js', '/css/CrayCSS.css']
}]);
```
Your Javascript File

```html
<script async src="YourJavascriptFile.js"></script>
```

**HTML5**

Firefox 3.6+, IE 10+, Chrome 2+, Safari 5+, iOS 5+, Android 3+
Reduce CSS,
Offload to the server,
Unblock Javascript,
Question everything.
Do I really need ___________ Bootstrap?
Do I really need ___________ jQuery ?
Do I really need ________ Ember _______?
Do I really need Backbone?
What’s the least amount needed to paint above the fold?
The fold hides all slowness.
WHICH OF THESE NONSENSICAL HYPOTHETICAL SITUATIONS DO YOU THINK BROUGHT LANDRY TO BREAKING BAD?

Alicia Lune
3 hours ago

You first meet Marky, a boy you once knew. Under the fine tulle of Coach Taylor down in Dillon, Texas, Landry was a strapping young lad who wanted nothing more than to belong and love a crazy gal named Tyra. But this is not that boy. No, that boy is long gone. Todd (that is his real name) is not that pimple-faced, awkward but strong young man who followed his buddy Saracen around like an
Is responsive design slower?
THE MOBILE PRO PAINT SHOP

Say goodbye to the paint store. The Paint Drop® offers expert color consultation, paint, and supplies on site, where you need them most.

WATCH THE VIDEO

EXPLORE THE TRUCK

Right Paint
We come to you with more than 500 gallons of premium interior and exterior paint and stain.

Right Colors
Our onboard spectrometer and trained professionals do the mixing and matching right on site.

Right Tools
We got you covered with our range of pro-level paint brushes, spray tips and everything to get the job done right.

Right Now
Ready to get started? Give us a call and our truck comes to you. No more waiting in line at the paint store.

thepaintdrop.com ... 492kb
status.heroku.com ... 190kb
These are first load problems.
Delays cause user confusion and cost us revenue.

Down with the spinners.
The Lobster Parable

Ladies and gentlemen: the story you are about to hear is true. Only the names have been changed...
Super Jumbo 3 lb. Live Maine Lobsters

Now $30 Off!
Hurry while quantities last!
These lobsters are solid proof that BIGGER IS BETTER! We're talking huge lobsters at an equally huge savings! This offer is only valid while the Big Daddy lobster are available which won't be long — so place your order today!

Dinner For 2 includes:
- Two Super-Jumbo 3 lb. Live Maine Lobsters
- Fresh Whole Lemon
- Free Clarified Butter
- Informational Packet (includes: Preparation Instruction & Recipe Booklet)

<table>
<thead>
<tr>
<th>SKU</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>JTL2JJ</td>
<td>The Big Daddy with Two 3 lb. lobsters</td>
<td>$109.95</td>
</tr>
<tr>
<td>XLOBJJ</td>
<td>Extra 3 lb. lobsters</td>
<td>$39.95</td>
</tr>
</tbody>
</table>
If there is a delay, animate or provide feedback.
Let’s talk about the client side.
Client side is slow on first load
If implemented poorly, can be slow subsequently.
Turbolinks  noun
A ruby gem for speeding up your internet pages
Javascript + pushState = Turbo Boost
Also known as PJAX
How to use it

**Gemfile**

gem 'turbolinks'

**application.js**

// = require turbolinks
Use these as well...

Turbolinks Events

- page:fetch  // Fires when starting to fetch page
- page:receive // Fires when page received not parsed
- page:change  // Fires when page is parsed and changed
- page:load    // Fires when all done
# Built in cache

Turbolinks saves last 10 pages

<table>
<thead>
<tr>
<th>Turbolinks Cache Events</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>page:change</td>
<td>// Fires when page is changed from cache</td>
</tr>
<tr>
<td>page:restore</td>
<td>// Fires when all done</td>
</tr>
</tbody>
</table>
Opt Out

Screw you Turbolinks

<div id="some-div" data-no-turbolink>
jQuery Turbolinks

Helps bind existing apps to Turbolinks

Gemfile

```ruby
gem 'jquery-turbolinks'
```

application.js

```javascript
//= require turbolinks
```
Prefetch Your DNS

Chrome, Firefox 3.5+, Safari 5+, Opera, IE 10
Prefetch Everything Else

Chrome, Firefox 3.5+, Safari 5+, Opera, IE 10
Tools should make us more efficient, otherwise it’s not a tool.
fin.