



DEVELOPING FOR MULTI-COMPONENT ENVIRONMENT

WHILE KEEPING YOUR SANITY



WHO'S TALKING?

github.com/jbaruch

@jbaruch

linkd.in/jbaruch



DEVELOPER WHO?

Job Description:

1. Hang out
with DevOps

2. Talk about it

DEVELOPER WHO?



AGENDA

- Mostly, Boromir memes.

AGENDA

- Mostly, Boromir memes.



A screenshot of a web browser window showing the Bintray download page for the Vert.x distribution.

The URL in the address bar is <https://bintray.com/vertx/downloads/distribution>.

The page features a header with the Bintray logo (Beta), a search bar, a Maven badge, user profile for jbaruch, and links for Get Help and Sign out.

vertx / downloads / distribution

Owned by **Vert.x** |  (2) |  Un-watch |  Contact |  Link |  Report | **Maven**

The Vert.x binary distribution | <http://dl.bintray.com/vertx/downloads> |  | 

General |  Readme |  Release Notes |  Reviews (0) | 

About This Package

Website	None
Issue Tracker	None
VCS	None
Licenses	Apache-2.0 

Downloads (v 2.1M5)

 [vert.x-2.1M5.tar.gz](#)
sha1: 29695bd9e55908823423598aeca344bc142c31cb

 [vert.x-2.1M5.zip](#)
sha1: 129aeb808d78e4a2c10371dfcc2df44cca77c52e

Version Notification Links

Versions

Latest Version Download Badge 

2.1M5
2.1M3
2.1M2
2.1M1
2.0.2-final

[View All](#)

Watchers (14) [View All](#)




Included in (0)

A screenshot of a web browser showing the Bintray download page for the "vertx / downloads / distribution" package. The URL in the address bar is <https://bintray.com/vertx/downloads/distribution>. A red arrow points from the top right towards the "maven" dropdown menu, which is highlighted with a yellow box containing the text "SaaS Webapp".

The page includes the following elements:

- Bintray Beta Logo**
- Search Bintray** input field
- maven** dropdown menu
- User profile: jbaruch
- Notifications: 0
- Help: Get Help | Sign out
- vertx / downloads / distribution** package name
- Owned by Vert.x**
- 5 stars (2 reviews)**
- Un-watch**, **Contact**, **Link**, **Report** buttons
- Maven** badge
- http://dl.bintray.com/vertx/downloads** link
- Set me up!** button
- Feedback** button
- General**, **Readme**, **Release Notes**, **Reviews (0)**, **Statistics** tabs (General is selected)
- About This Package** section:
 - Website: None
 - Issue Tracker: None
 - VCS: None
 - Licenses: Apache-2.0
- Version Notification Links** (eye icon)
- Versions**: 2.1M5, 2.1M3, 2.1M2, 2.1M1, 2.0.2-final. A **Latest Version Download Badge** (Twitter icon) is shown next to 2.1M5.
- Downloads (v 2.1M5)**
 - vert.x-2.1M5.tar.gz**: sha1: 29695bd... (link)
 - vert.x-2.1M5.zip**: sha1: 129aeb... (link)
- Watchers (14)**: View All. Shows 14 user profiles and 8 placeholder icons.
- Included in (0)**

A screenshot of a web browser showing a package page on Bintray. The URL in the address bar is <https://bintray.com/vertx/downloads/distribution>. The page title is "vertx / downloads / distribution".

The top navigation bar includes the Bintray logo, a search bar, a Maven dropdown menu, user profile for jbaruch, and links for "Get Help" and "Sign out". A red callout box highlights the "SaaS Webapp" text next to the Maven icon.

The main content area shows the package details:

- Owned by:** Vert.x
- Rating:** ★★★★★ (2)
- Actions:** Un-watch, Contact, Link, Report
- Description:** The Vert.x binary distribution
- Links:** Set me up!, Feedback

The package has the following sections:

- General:** Selected tab.
- Readme:**
- Release Notes:**
- Reviews (0):**
- Statistics:**

About This Package:

Website	None
Issue Tracker	None
VCS	None
Licenses	Apache-2.0

Version Notification Links: [View All](#)

Versions:

- 2.1M5
- 2.1M3
- 2.1M2
- 2.1M1
- 2.0.2-final

Latest Version Download Badge: [Twitter](#)

Downloads (v 2.1M5):

- [vert.x-2.1M5.tar.gz](#)
sha1: 29695bd9e55908823423598aeca344bc14205
- [vert.x-2.1M5.zip](#)
sha1: 129aeb808d78e4a2c10371dfcc2df44cca77c52e

Lots of large files (red callout box pointing to the download links)

Watchers (14): [View All](#)

Included in (0)

A screenshot of a web browser showing the Bintray download page for the 'vertx / downloads' package. The page has a blue header with the Bintray logo, a search bar, and a user profile for jbaruch. A red callout box labeled 'SaaS Webapp' points to the user profile area. Another red callout box labeled 'Full text search' points to the search bar.

The main content area shows the package details:

- vertx / downloads** (Beta)
- Owned by Vert.x
- 5 stars (2 reviews)
- Un-watch, Contact, Link, Report buttons
- maven**
- <http://dl.bintray.com/vertx/downloads>
- Set me up!** button
- Feedback** button

Below the header, there are tabs for General, Readme, Release Notes, Reviews (0), and Statistics. The General tab is selected.

About This Package

Website	None
Issue Tracker	None
VCS	None
Licenses	Apache-2.0

Version Notification Links (eye icon)

Versions

- 2.1M5
- 2.1M3
- 2.1M2
- 2.1M1
- 2.0.2-final

Latest Version Download Badge (Twitter icon)

Downloads (v 2.1M5)

- vert.x-2.1M5.tar.gz**
sha1: 29695bd9e55908823423598aeca344bc1426
- vert.x-2.1M5.zip**
sha1: 129aeb808d78e4a2c10371dfcc2df44cca77c52e

Lots of large files (red callout box pointing to the download links)

View All button

Watchers (14)

Included in (0)

A screenshot of a web browser showing the Bintray download page for the Vert.x distribution. The page has a blue header with the Bintray logo, a search bar, and a user profile for jbaruch. A red callout box labeled "SaaS Webapp" points to the top right corner of the header.

The main content area shows the package details for "vertx / downloads". A red callout box labeled "Full text search" points to the search bar. Another red callout box labeled "Metadata" points to the "General" tab in the navigation bar.

The "Downloads" section shows two files: "vert.x-2.1M5.tar.gz" and "vert.x-2.1M5.zip". A red callout box labeled "Lots of large files" points to these files. The "Versions" section lists several versions: 2.1M5, 2.1M3, 2.1M2, 2.1M1, and 2.0.2-final. The "Watchers" section shows 14 users with their profile pictures, and a red callout box labeled "View All" points to the "View All" link next to the watcher count.

The bottom of the page shows "Included in (0)".

WE LOVE OUR TOOLS (AND FRAMEWORKS)







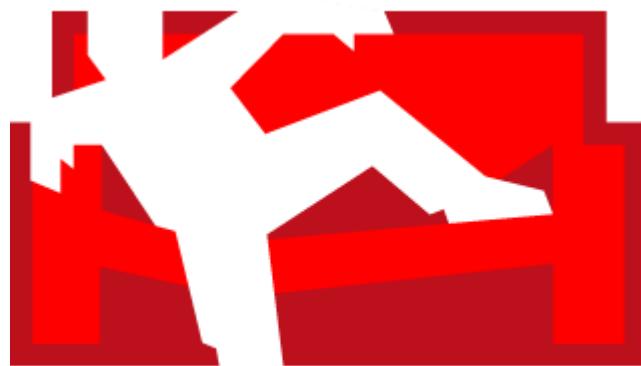


mongoDB





mongoDB





mongoDB



EH**CACHE**





mongoDB



EH**CACHE**



 Sphinx

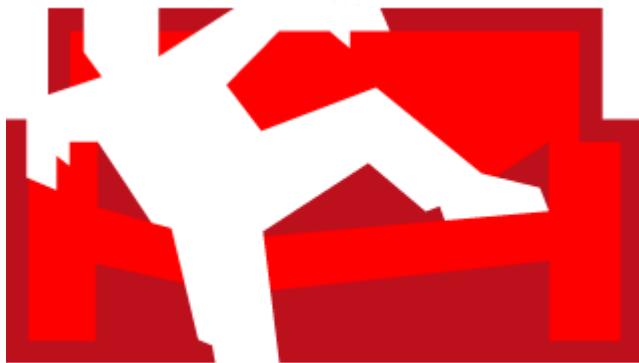




mongoDB



EH**CACHE**

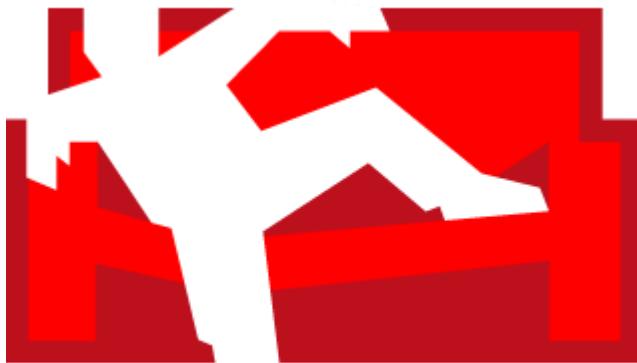
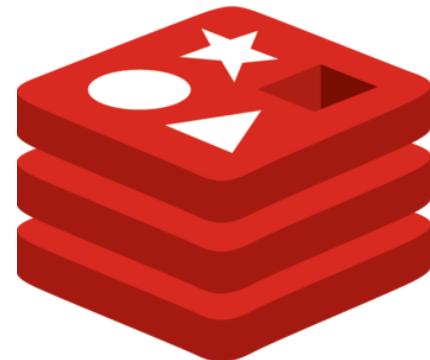




mongoDB



EHCA~~C~~HE

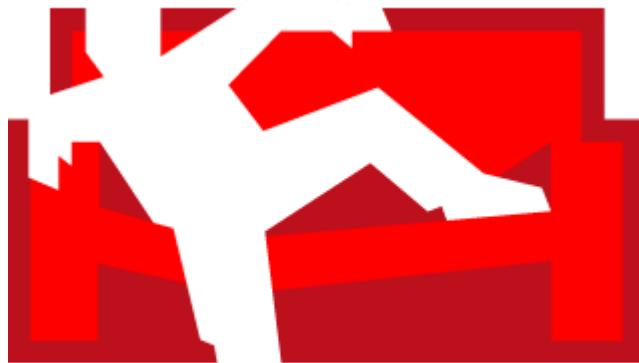
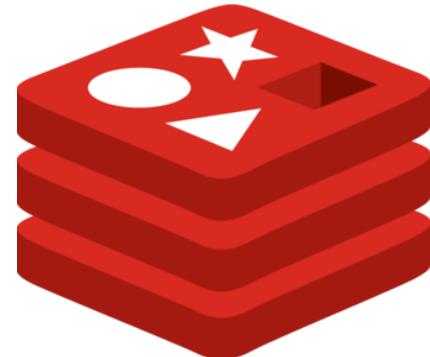




mongoDB



EHCA~~C~~HE



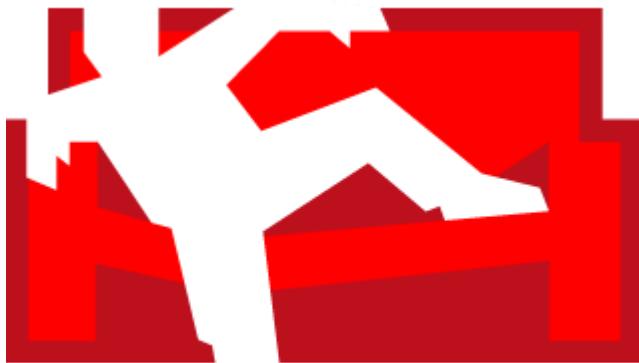
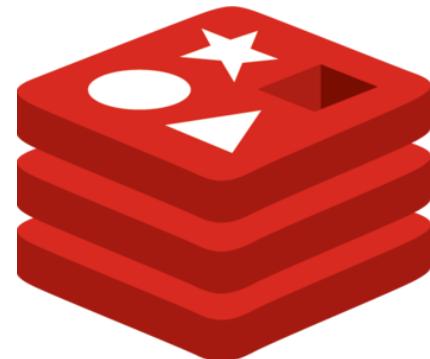
Apache



mongoDB



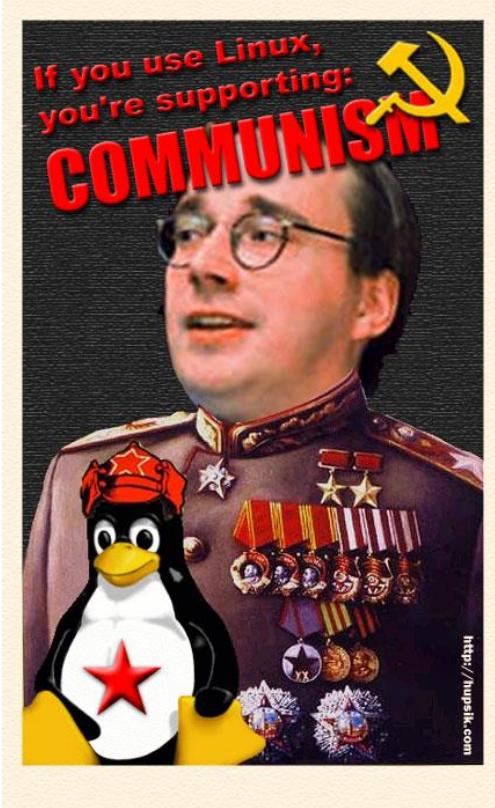
EHCACHE



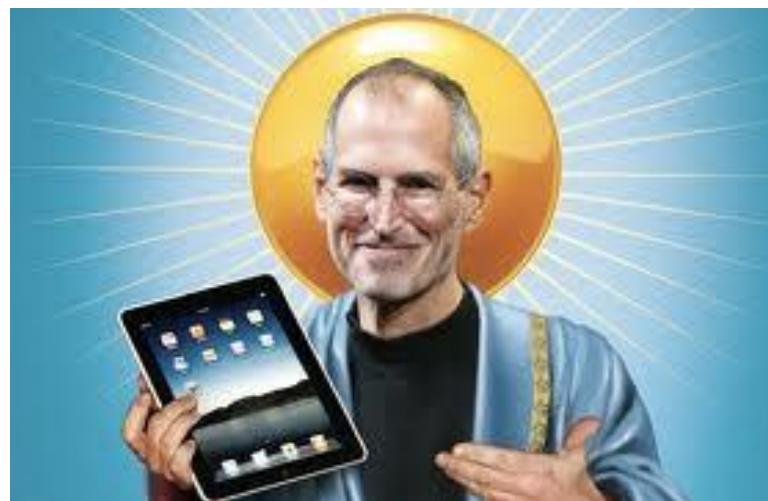
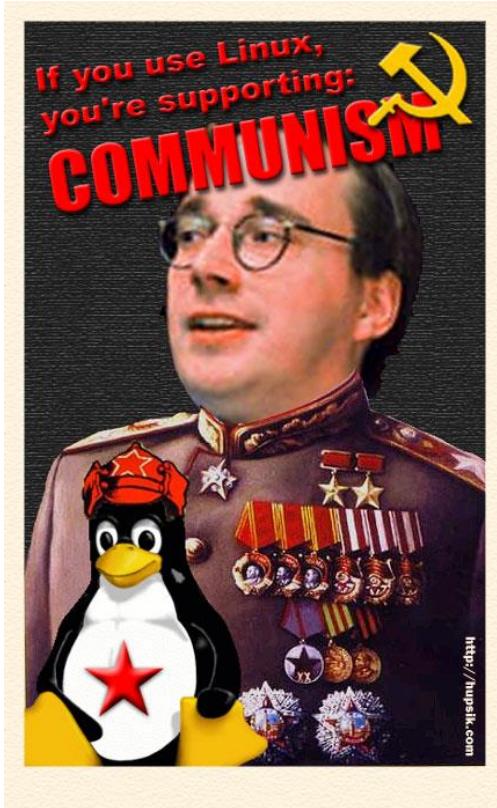
NGINX

WE ARE LIBERAL

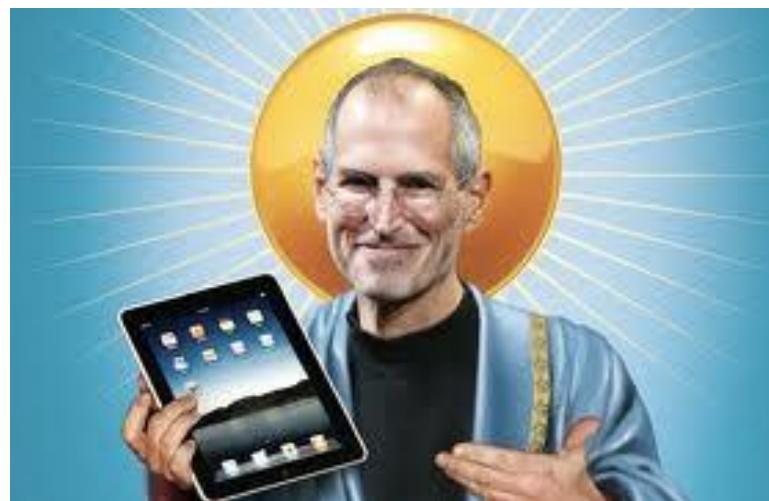
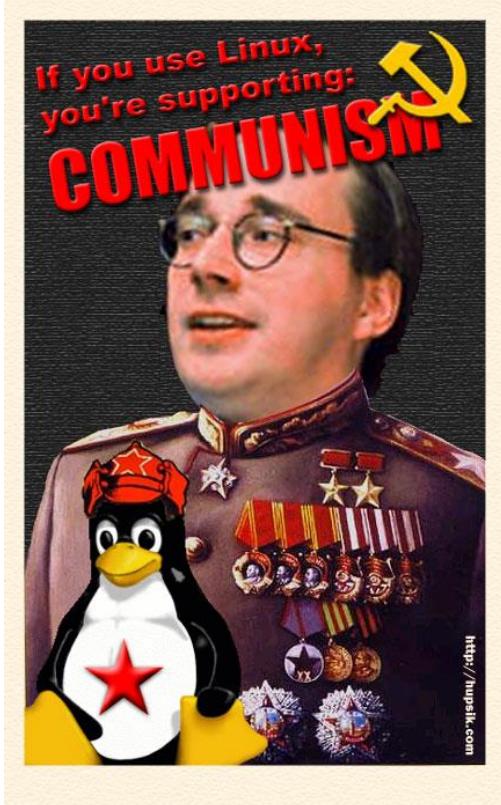
WE ARE LIBERAL



WE ARE LIBERAL



WE ARE LIBERAL



```
0x00000000,0x8016A950,0x00000001,0x00000006)
HANDLED *** Address 8016a950 has been set at 80100000
.6.2 irql:if SYSEVER 0xf00000565

Name          Dll Base  DateStamp - Name
ntoskrnl.exe 80010000 33247200 - ntl.dll
atapi.sys     80007000 33248004 - SIPORT.
Disk.sys      801db000 3360151 - SAS2.SY
Ntfs.sys      80237000 344eeb4 - luvid.sy
NTice.sys     f1f48000 31ec6c8d - floppy.SY
Cdrom.SYS    f228e000 31ec6c91 - null.SYS
KSecDD.SYS   f2290000 335e0000 - SYS
win32k.sys    f60e2000 344eeb4 - ntl.dll
Cdfs.SYS     fde82000 31ec6c91 - ntl.dll
nbt.sys       fde35000 31f68000 - 
netbt.sys     f2008000 31f68000 - 
afd.sys       fde14000 31f68000 - 
Parport.SYS  fidd0000 31ec6c91 - null.SYS
```



ONE DOES NOT SIMPLY

SETUP ALL THAT ON ALL THIS

THE SOLUTION

THE SOLUTION



THE SOLUTION



THE SOLUTION



THE SOLUTION



CHEF WHAT?



OPSCODE CHEF



CHEF

[SIGN IN](#) [MANAGEMENT CONSOLE](#)



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[Learn Chef](#) ▾

[About](#) ▾

Chef is an **automation platform** that transforms **infrastructure into code**. Stop thinking in terms of physical and virtual servers. With Chef, your real asset is the code that brings those servers and the services they provide to life. **An automated infrastructure** can accelerate your time to

CHEF WORKS WITH COOKBOOKS

Cookbooks

A cookbook is the fundamental unit of configuration and policy distribution. Each cookbook defines a scenario, such as everything needed to install and configure MySQL, and then it contains all of the components that are required to support that scenario, including:

- Attribute values that are set on nodes
- Definitions that allow the creation of reusable collections of resources
- File distributions

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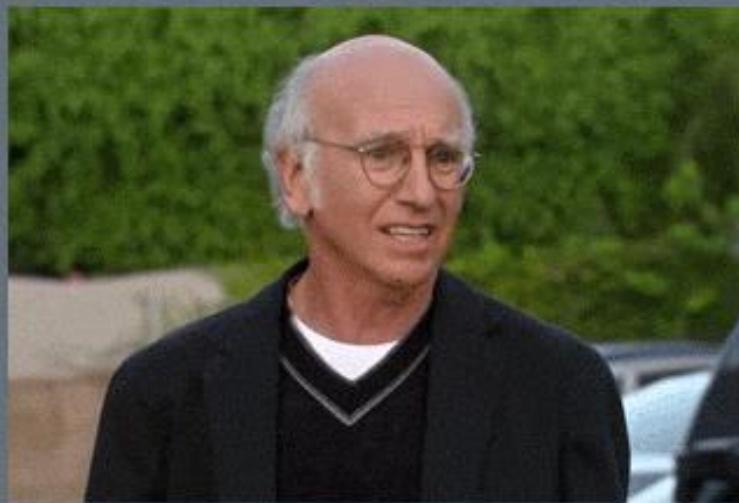
INSTALL MySQL IN RUBY

```
115
116 if platform_family? 'windows'
117   require 'win32/service'
118
119   windows_path node['mysql']['bin_dir'] do
120     action :add
121   end
122
123   windows_batch "install mysql service" do
124     command "#{node['mysql']['bin_dir']}\\mysqld.exe\" --install #{node['mysql']['service_name']}"
125     not_if { Win32::Service.exists?(node['mysql']['service_name']) }
126   end
127 end
128
```

WHY NOT PUPPET?

DEVOPS REACTIONS

The moment you have to pick between puppet and chef



⌚ 1 year ago

❤️ 5 notes



Like

64



Tweet

84

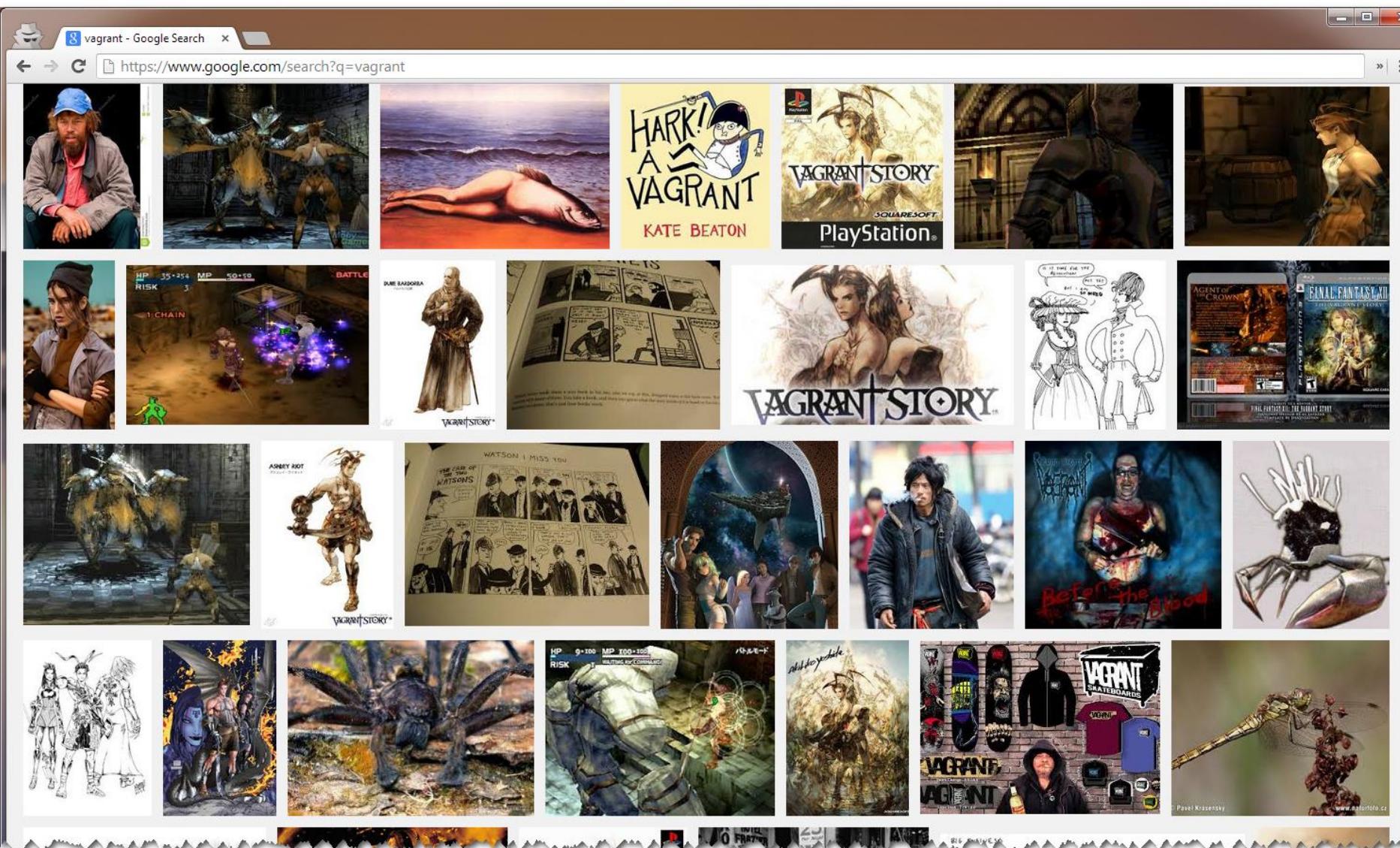
THE SOLUTION



THE SOLUTION



VAGRANT WHAT?



VAGRANT



VAGRANT

HOW VAGRANT BENEFITS YOU

If you're a **developer**, Vagrant will **isolate** dependencies and their configuration within a **single disposable, consistent environment**, without sacrificing any of the tools you're used to working with (editors, browsers, debuggers, etc.). Once you or someone else creates a single [Vagrantfile](#), you just need to **vagrant up** and everything is installed

SETUP VAGRANT WITH CHEF

CHEF SOLO PROVISIONER

Provisioner name: `chef_solo`

The chef solo provisioner allows you to provision the guest using Chef specifically with [Chef Solo](#).

SETUP VAGRANT WITH CHEF

```
config.vm.box = "centos-6"

# Enable and configure the chef solo provisioner
config.vm.provision :chef_solo do |chef|
  chef.cookbooks_path = "#{checkout}"
  #chef.data_bags_path = "install/chef/data_bags"
  chef.roles_path = "install/chef/roles"

  chef.add_role("bintray_common_vagrant_server")
  chef.add_role("bintray_interaction_vagrant_server")
  chef.add_role("bintray_download_vagrant_server")
end
end
```

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```

DEVELOPMENT



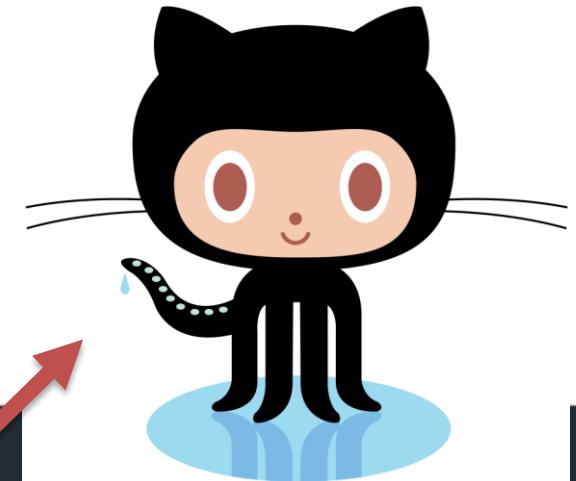
DEVELOPMENT



chef-solo

chef-solo is an open source version of the chef-client that allows using cookbooks with nodes without requiring access to a server. **chef-solo runs locally** and requires that a **cookbook** (and any of its dependencies) **be on the same physical disk as the node**. chef-solo is a limited-functionality version of the chef-client and **does not support** the following:

DEVELOPMENT

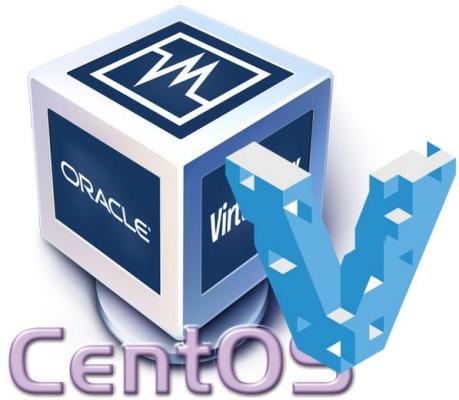


CHEF DOCUMENTS

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DEVELOPMENT



chef-solo

chef-solo is a

cookbooks w

locally and e

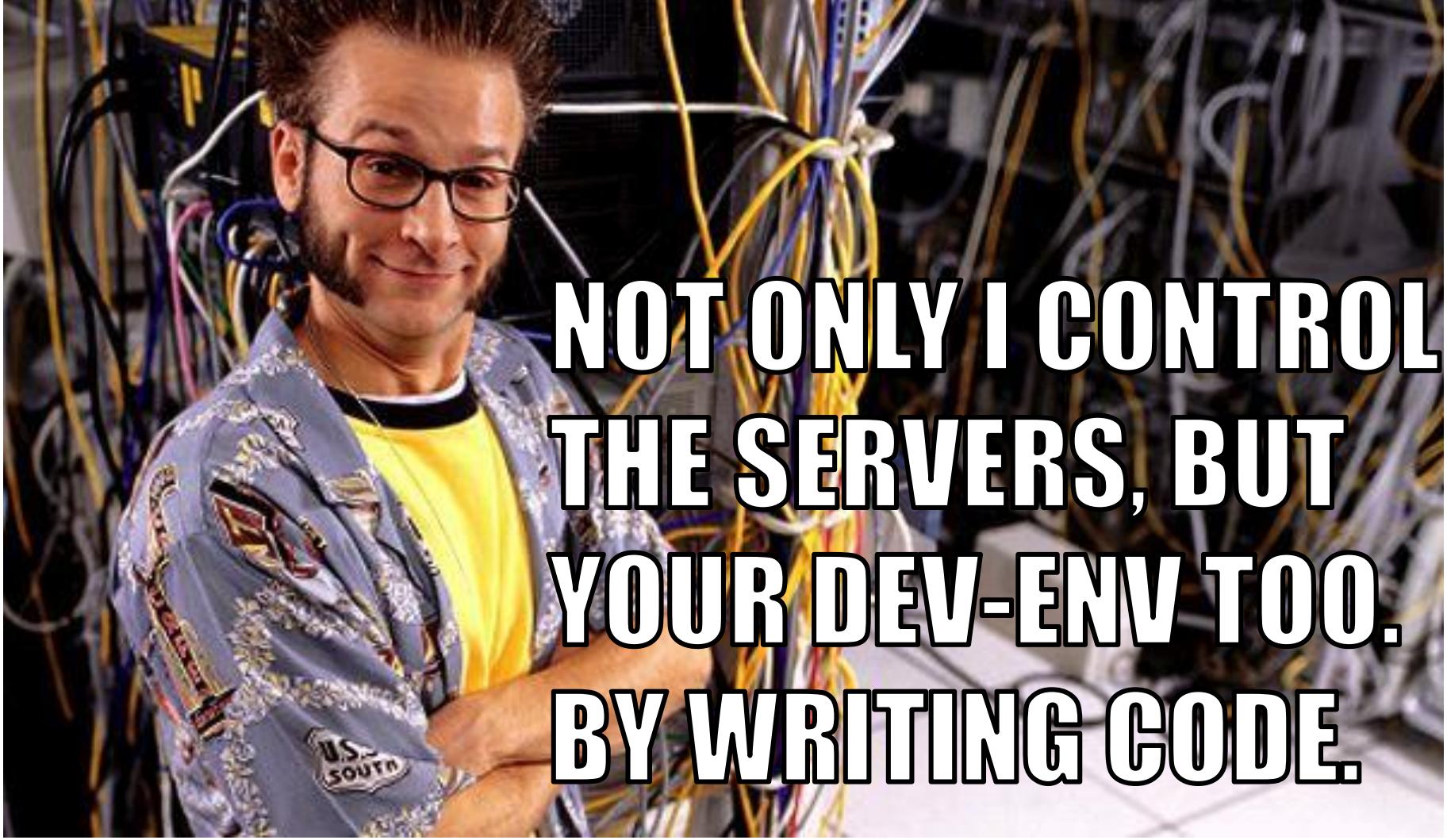
the same ph

version of th

Directory of D:\Users\jbaruch\projects\cookbooks\cookbooks

```
29/01/2014  16:27  <DIR>          .
29/01/2014  16:27  <DIR>          ..
29/01/2014  16:27  <DIR>          apache2
29/01/2014  16:27  <DIR>          apt
29/01/2014  16:27  <DIR>          ark
29/01/2014  16:27  <DIR>          artifactory
29/01/2014  16:27  <DIR>          aws
29/01/2014  16:27  <DIR>          basic-pack
29/01/2014  16:27  <DIR>          bluepill
29/01/2014  16:27  <DIR>          bt_install
29/01/2014  16:27  <DIR>          build-essential
29/01/2014  16:27  <DIR>          chef_handler
29/01/2014  16:27  <DIR>          couchdb
29/01/2014  16:27  <DIR>          deploy
29/01/2014  16:27  <DIR>          devnullsmtp
29/01/2014  16:27  <DIR>         .elasticsearch
29/01/2014  16:27  <DIR>          erlang
29/01/2014  16:27  <DIR>          haproxy
29/01/2014  16:27  <DIR>          incapsula
29/01/2014  16:27  <DIR>          install_from
29/01/2014  16:27  <DIR>          java
29/01/2014  16:27  <DIR>          jfrog
29/01/2014  16:27  <DIR>          libs
29/01/2014  16:27  <DIR>          logentries
29/01/2014  16:27  <DIR>          loggly
29/01/2014  16:27  <DIR>          logicmonitor
29/01/2014  16:27  <DIR>          logrotate
29/01/2014  16:27  <DIR>          memcached
29/01/2014  16:27  <DIR>          metachef
29/01/2014  16:27  <DIR>         .mongodb
29/01/2014  16:27  <DIR>          mount
29/01/2014  16:27  <DIR>          mysql
29/01/2014  16:27  <DIR>          nagios
29/01/2014  16:27  <DIR>          network-host
29/01/2014  16:27  <DIR>          network-keys
29/01/2014  16:27  <DIR>          nginx
```

DEVOPS IN DEV ENV



**NOT ONLY I CONTROL
THE SERVERS, BUT
YOUR DEV-ENV TOO.
BY WRITING CODE.**

I. VAGRANT BOOTS CENTOS ON VIRTUALBOX

1. VAGRANT BOOTS CENTOS
ON VIRTUALBOX
2. CHEF INSTALLS ALL DB
AND SERVICE RPMAS
FROM PRIVATE YUMA
REPO

1. VAGRANT BOOTS CENTOS
ON VIRTUALBOX
2. CHEF INSTALS ALL DB
AND SERVICE RPMAS
FROM PRIVATE YUMA
REPO
3. PROFIT!

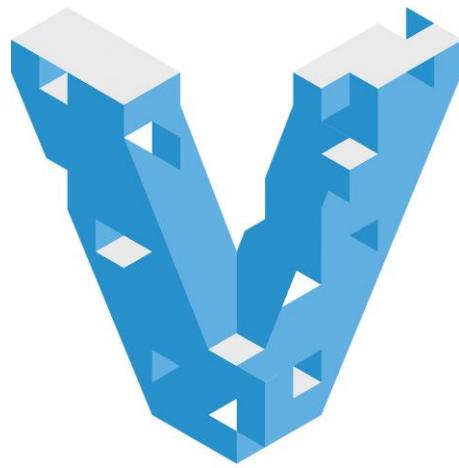
GOING TO PRODUCTION...



THE SOLUTION



THE SOLUTION



AS EASY AS...

Jenkins

Jenkins bintray-releases #2184

- [Back to Project](#)
- [Status](#)
- [Changes](#)
- [Console Output \[raw\]](#)
- [View Build Information](#)
- [Polling Log](#)
- [Injected Environment Variables](#)
- [Git Build Data:bintray](#)

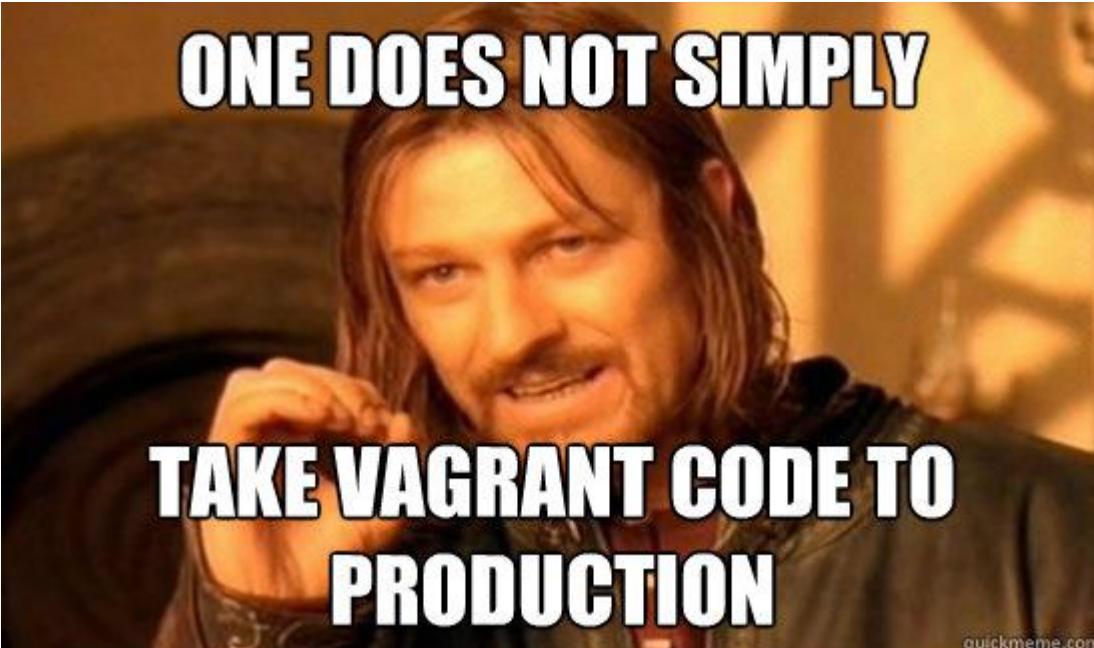
Console Output

Skipping 23,946 KB.. [Full Log](#)

```
+ chmod +x bintray/jenkins-scripts/vagrant_starter.sh
+ ./bintray/jenkins-scripts/vagrant_starter.sh /media/ramdisk
Checkout directory is '/media/ramdisk/jenkins-workspace' -
Current cookbook revision is a28a1f2b0c5ca51d4b64934fd156d20
Last documented cookbook revision is a28a1f2b0c5ca51d4b64934
Documenting current cookbooks revision
Checking to see if the last 'vagrant up' log contains any er
Raising Vagrant machine and documenting process
[default] VM already created. Booting if it's not already r
```

CLOUD

CLOUD EVERYWHERE



**ONE DOES NOT SIMPLY
TAKE VAGRANT CODE TO
PRODUCTION**

quickmeme.com

PRODUCTION – CLOUD ALL THE WAY



chef-solo

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PRODUCTION – CLOUD ALL THE WAY



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PRODUCTION – CLOUD ALL THE WAY



PRODUCTION – CLOUD ALL THE WAY



PRODUCTION – CLOUD ALL THE WAY

jclouds™

SOFTLAYER®
CentOS



THE GOOD

THE GOOD

1. EASY SETUP

THE GOOD

1. EASY SETUP

2. SAME SETUP (INC. CI)

THE GOOD

1. EASY SETUP
2. SAME SETUP (INC. CI)
3. CHANGES PROVISIONING

THE GOOD

1. EASY SETUP
2. SAME SETUP (INC. CI)
3. CHANGES PROVISIONING
4. KILL INSTEAD OF FIX

THE BAD

THE BAD

1. CHEF SOLO != CHEF SERVER

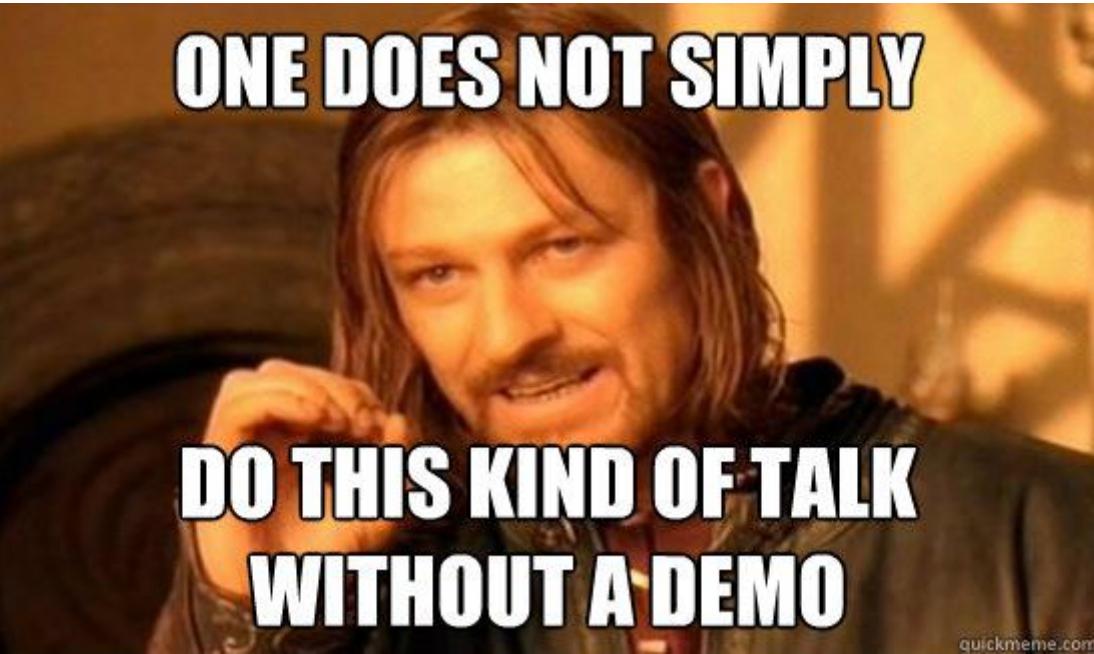
THE BAD

1. CHEF SOLO != CHEF SERVER
2. BLACK BOX MAGIC FOR DEVELOPERS

THE UGLY

THE UGLY

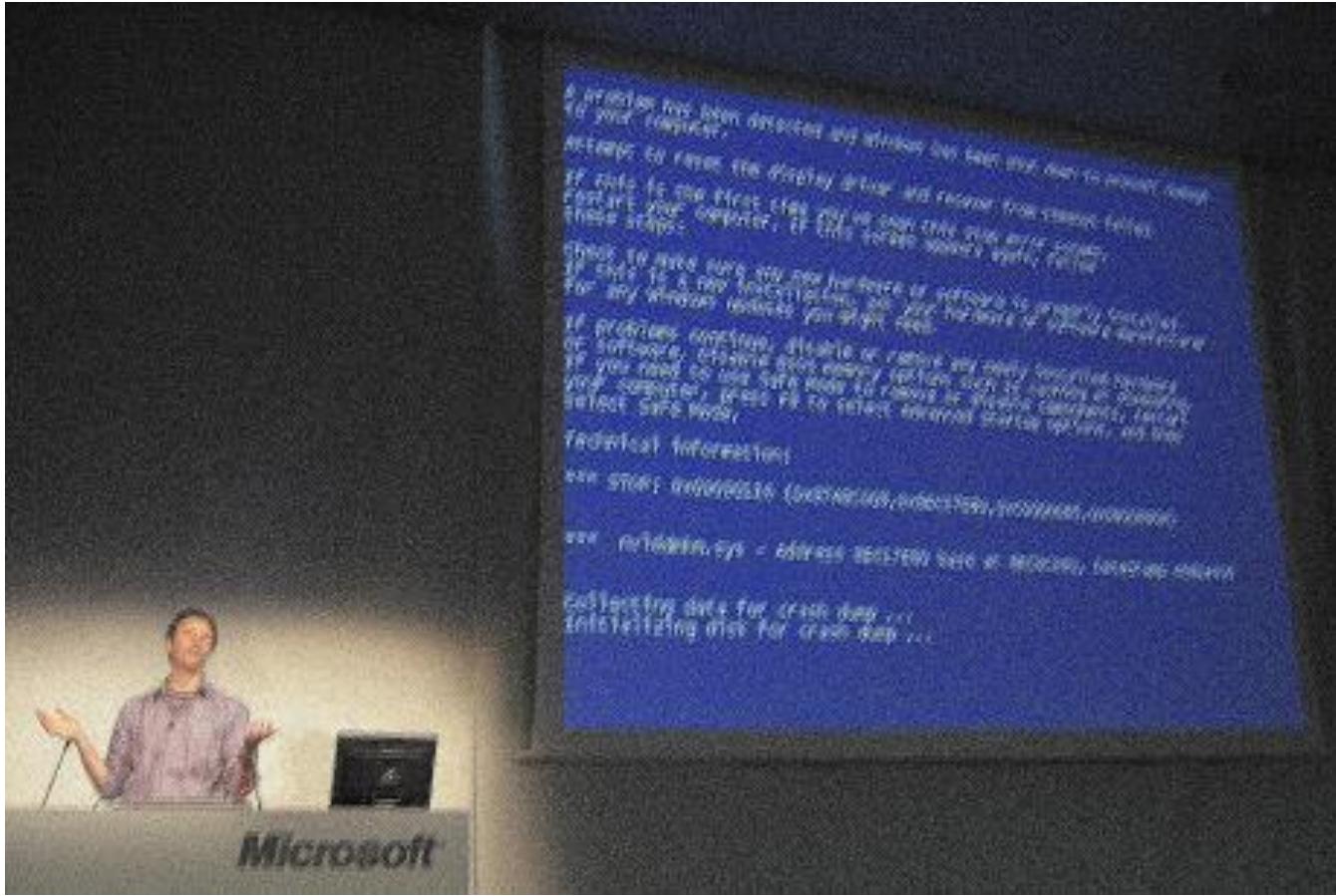




**ONE DOES NOT SIMPLY
DO THIS KIND OF TALK
WITHOUT A DEMO**

quickmeme.com

DEMO TIME!

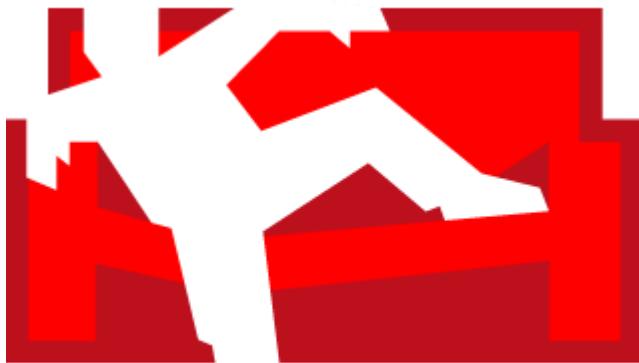
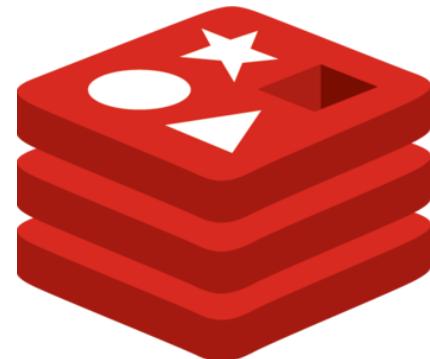




mongoDB



EHCACHE



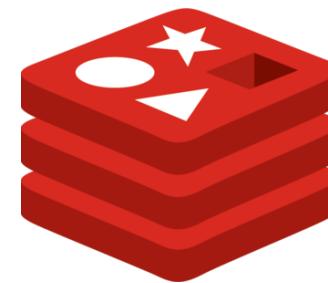
NGINX



mongoDB



EHCACHE



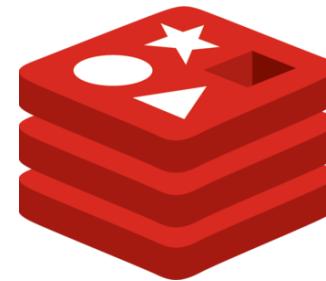
NGINX



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EHCACHE



NGINX

No, THANK YOU!



WHO'S AWESOME?

You're Awesome