RubyGems on Steroids

Fred Simon
JFrog

www.jfrog.com

@jenkinsconf

Who's talking?

github.com/freddy33

@freddy33

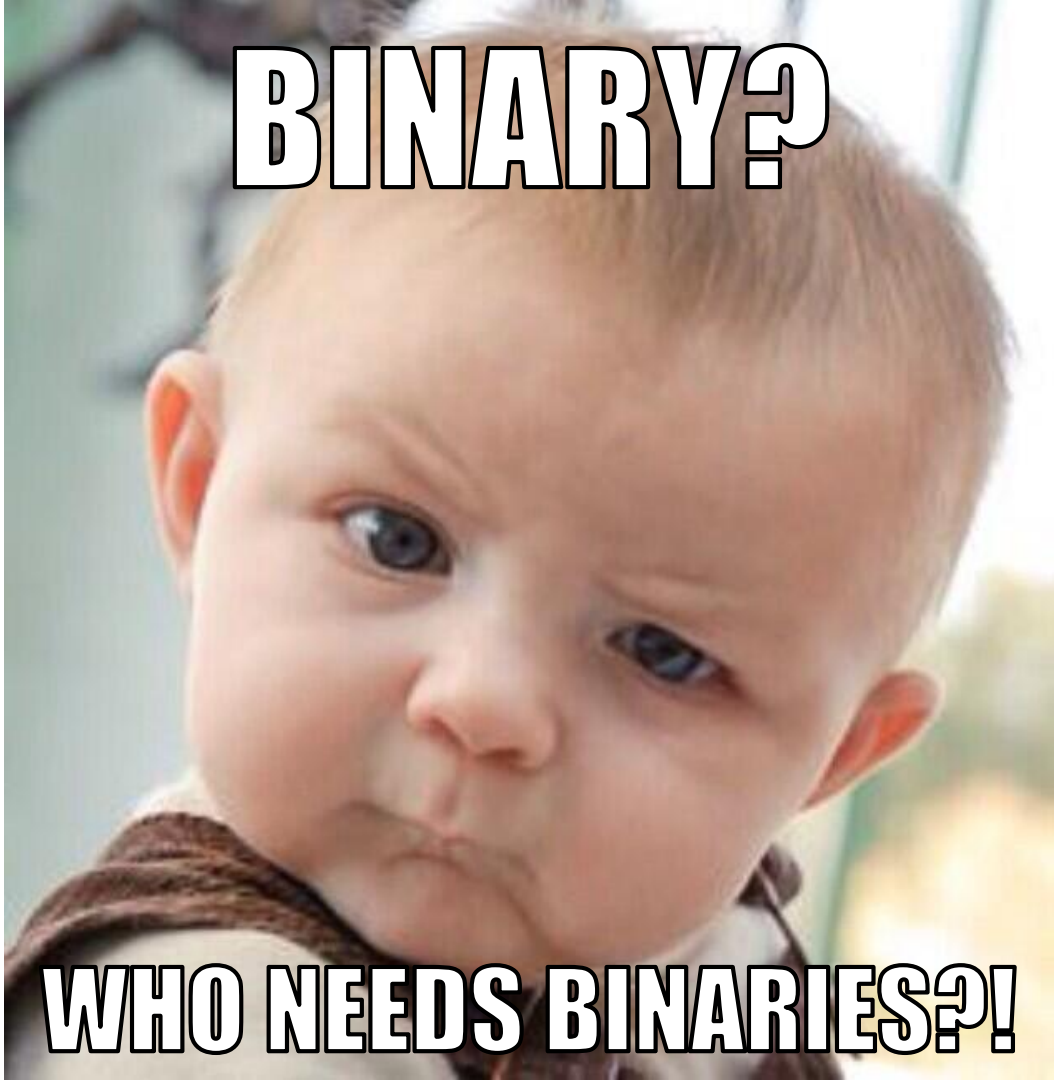
What Frog?

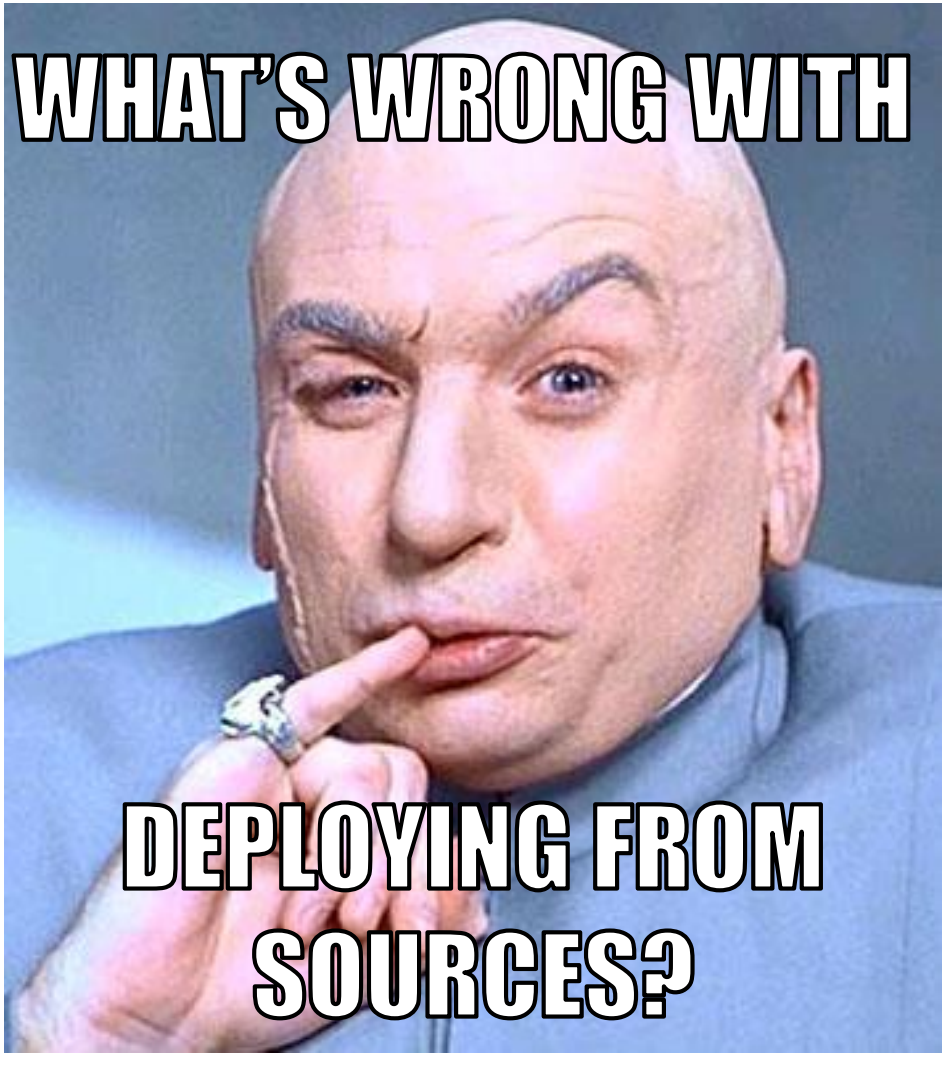
What Frog?

What Frog?

What Frog?

JFrog Ltd
Home
Products & Services
Insights
Analytics
Artifactory Repository Manager
Product Overview
The First Binary Repository Manager
Artifactory, JFrog's flagship product. It is an enterprise-grade Binary Repository Manager that cent
all aspects of managing software binaries. It is deployed per server serving teams of develope
artifactory


BINARY?
WHO NEEDS BINARIES?!


WHAT'S WRONG WITH
DEPLOYING FROM SOURCES?

Subject: [ruby-talk:00247] Ruby Application Arvhive
From: Manpreet Singh <manpreet.singh sun.com>
Date: Wed, 10 Mar 1999 14:07:15 -0800
Hi,
Does anybody know if there is a plan to create a CPAN (perl) like archive for ruby modules and having a

perl -MCPAN -e shell

like facility?

Thanks
Manpreet

RubyConf 2001 - Conference Notes

Disclaimer: Please excuse my horrid pictures. Hopefully, someone else took some decent ones and can send them in for inclusion.

Thursday, Oct. 11, 2001

The conference hadn't officially begun, but a notable amount of people arrived by Thursday evening. We met in the hotel lounge for some light conversati

Firstly, Brian Marick started handing out cow magnets, which dominated conversation for the rest of the evening (and then some), and also managed to de

Other than cow magnets, the main topics of conversation were:

RubyGems - Ryan Leavengood

Just when we thought the fun was winding down, Ryan Leavengood (who, incidentally helped out with the fabulous t-shirts) stole the show with a demo ar very similar to Java's jar files.

Currently, RubyGems can package pure Ruby libraries so that they will be loaded from a single file. Ryan has overridden "require" and "load" to pull code done". He was able to demonstrate the creation of a RubyGem archive--demoing with NQXML--and the usage of that archive from another program.

RubyConf 2001

RubyGems

Something similar to Java Jars:

Ability to pack Ruby libraries so that they will be loaded from a single file

Let's build some gems!

Recipe

1. Take sources

Recipe

1. Take sources – OK

Recipe

1. Take sources – OK
2. Bring dependencies

Recipe

1. Take sources – OK
2. Bring dependencies – where from?

Recipe

1. Take sources – OK
2. Bring dependencies – where from?
3. Build binaries

Recipe

1. Take sources – OK
2. Bring dependencies – where from?
3. Build binaries – OK

Recipe

1. Take sources – OK
2. Bring dependencies – where from?
3. Build binaries – OK
4. …

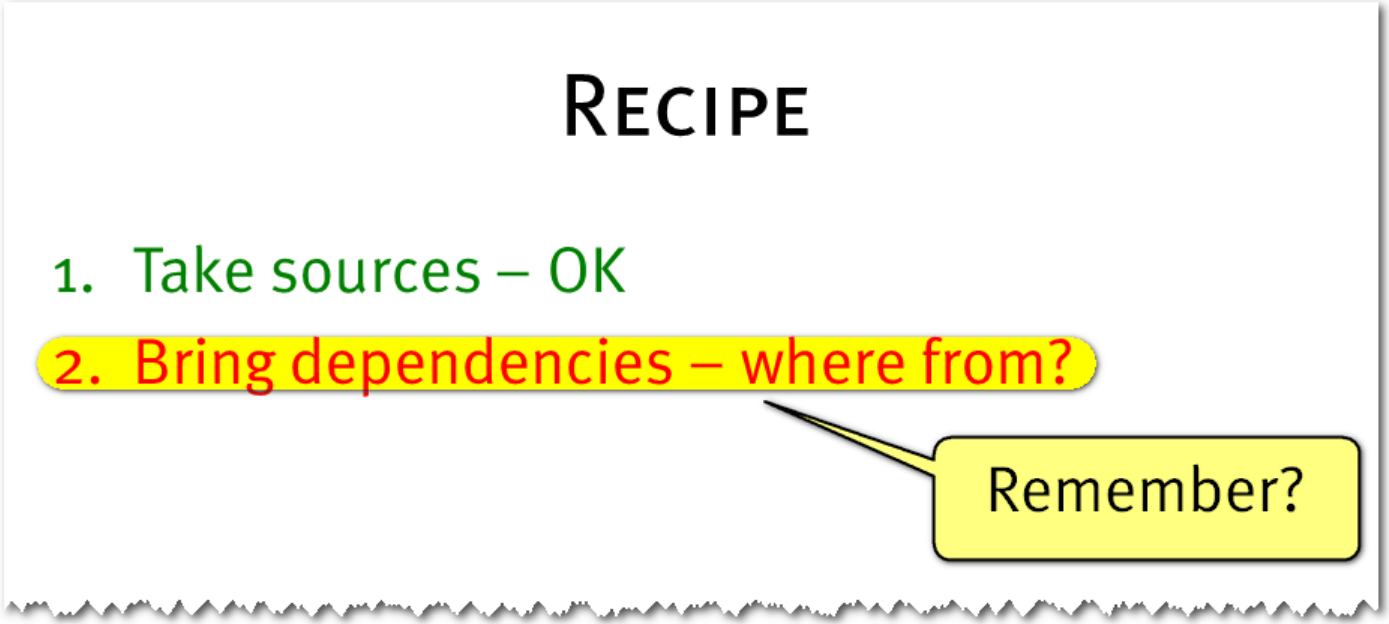
Recipe

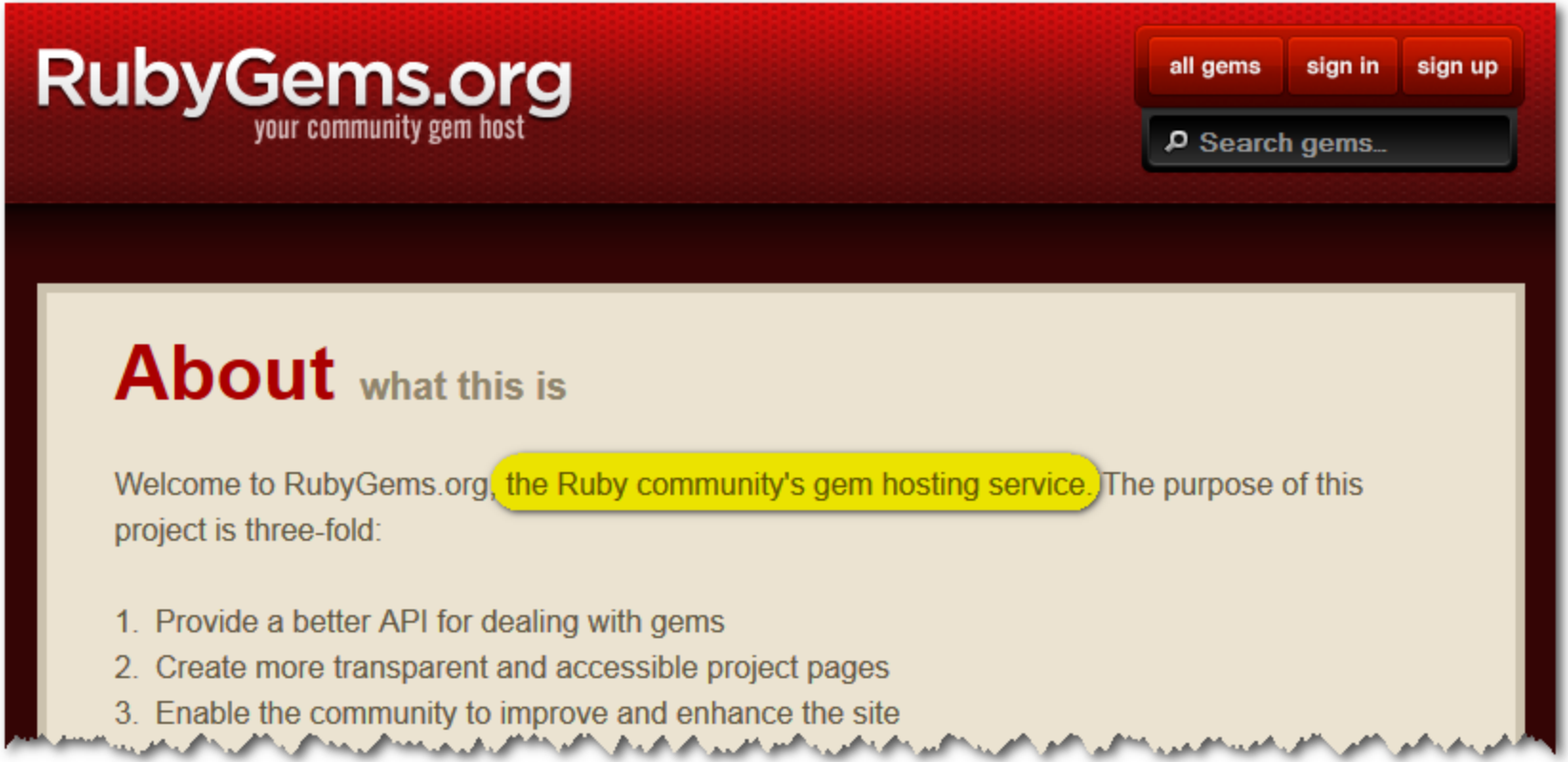
1. Take sources – OK
2. Bring dependencies – where from?
3. Build binaries – OK
4. … - now what?

HERE COMES THE BINARY REPOSITORY

What is Binary Repository

Binary Repository as Modules Source




RubyGems.org
your community gem host
all gems
sign in
sign up
Search gems...
About
what this is
Welcome to RubyGems.org, the Ruby community's gem hosting service. The purpose of this project is three-fold:
1. Provide a better API for dealing with gems
2. Create more transparent and accessible project pages
3. Enable the community to improve and enhance the site

ISSUES? WHAT ISSUES?!

heroku status

current status and incident report

Ruby deploys temporarily degraded

Development 14h

Issue

Security Notice

Rubygems.org has been affected by a recent YAML parsing vulnerability. Ruby deploys have been temporarily disabled to protect our users from malicious gems. We will have more information available shortly, including a workaround for those who wish to deploy anyway.

Thus far, there is nothing to suggest that any widely used gems have been altered.

We're working to audit Rubygems changes and will have updates throughout the day.

Posted 8 months ago, Jan 30, 2013 18:50 UTC

Ruby deploys tempor

Issue

Security Notice

Rubygems.org has been a
protect our users from mal
wish to deploy anyway.

Thus far, there is nothing t

We're working to audit Rul

Posted 8 months ago, Jan 30, 2

VB

what's hot? GRAND THEFT AUTO V · IPHONE 5S · GOOGLE

/NEWS

RubyGems.org hacked, interrupting Heroku services and putting sites using Rails at risk

January 30, 2013 8:49 PM
John Koetsier

6 Comments

Ruby package distributor RubyGems.org was hacked today, disrupting web developers globally and causing service shutdowns at popular hosting service Heroku.

Development 14h

mporarily disabled to
orkaround for those who

Ruby deploys tempor

Issue

Security Notice

Rubygems.org has been a
protect our users from mal
wish to deploy anyway.

Thus far, there is nothing t

We're working to audit Rul

Posted 8 months ago, Jan 30, 2

Development 14h

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orkaround for those who

what's hot? GRAND THEFT AUTO V · IPHONE 5S · GOOGLE

rg hacked, interrupting Heroku
itting sites using Rails at risk

January 30, 2013 8:49 PM
John Koetsier

Ruby package distributor RubyGems.org was hacked today, dis
developers globally and causing service shutdowns at popular host
Heroku.

Questions | Tags | Users | Badges | Unanswered

Where can I install gems from when rubygems.org is down?

13

4

Currently Rubygems.org is down - the website reports an error, and a few gem install tasks are returning 500 errors.

Is there a mirror / backup source of gem files, or is rubygems.org essentially a single point of failure within the ruby gem installation process ?

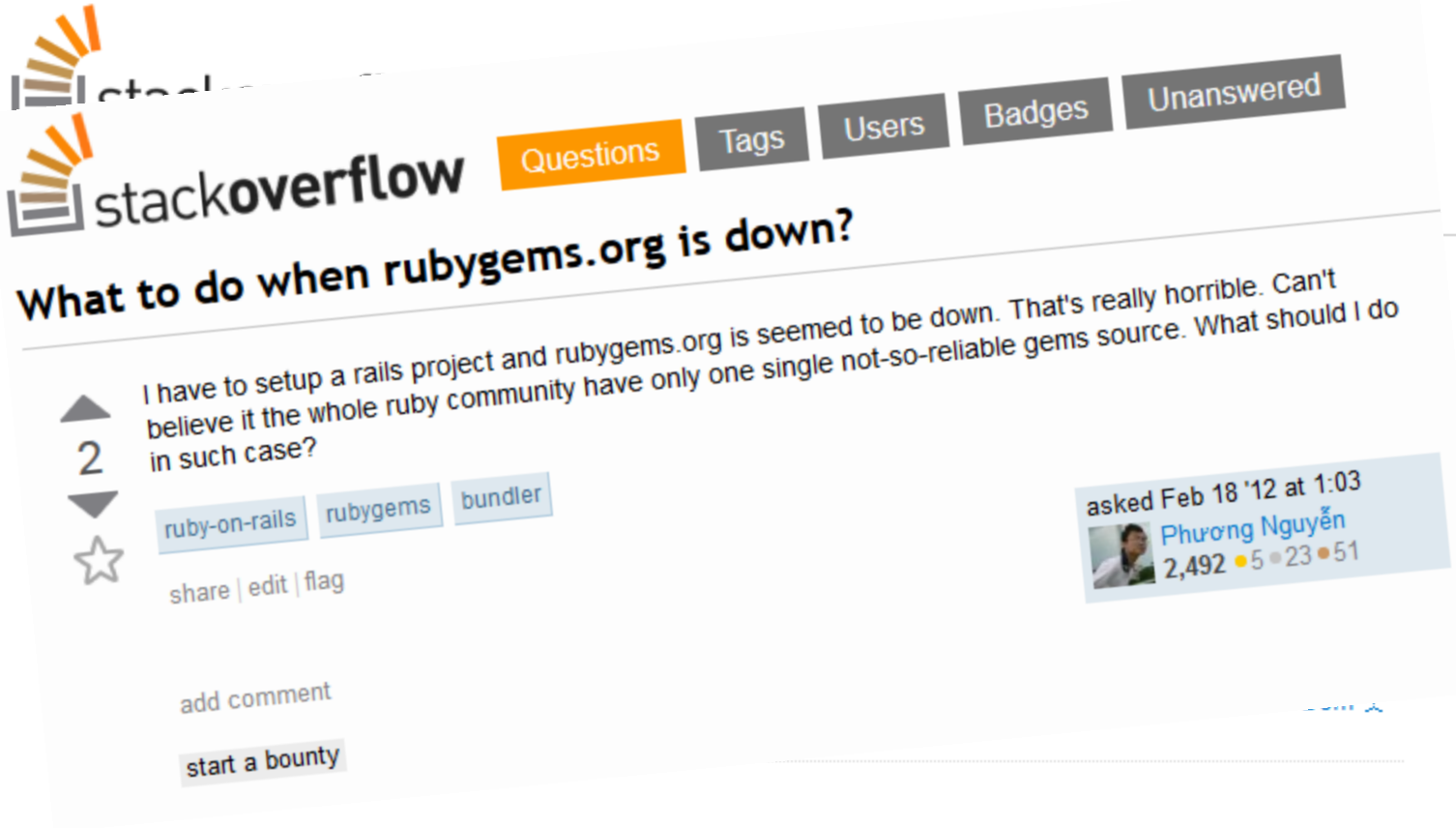
ruby gem

share | edit | flag

asked Jan 1 '12 at 13:30

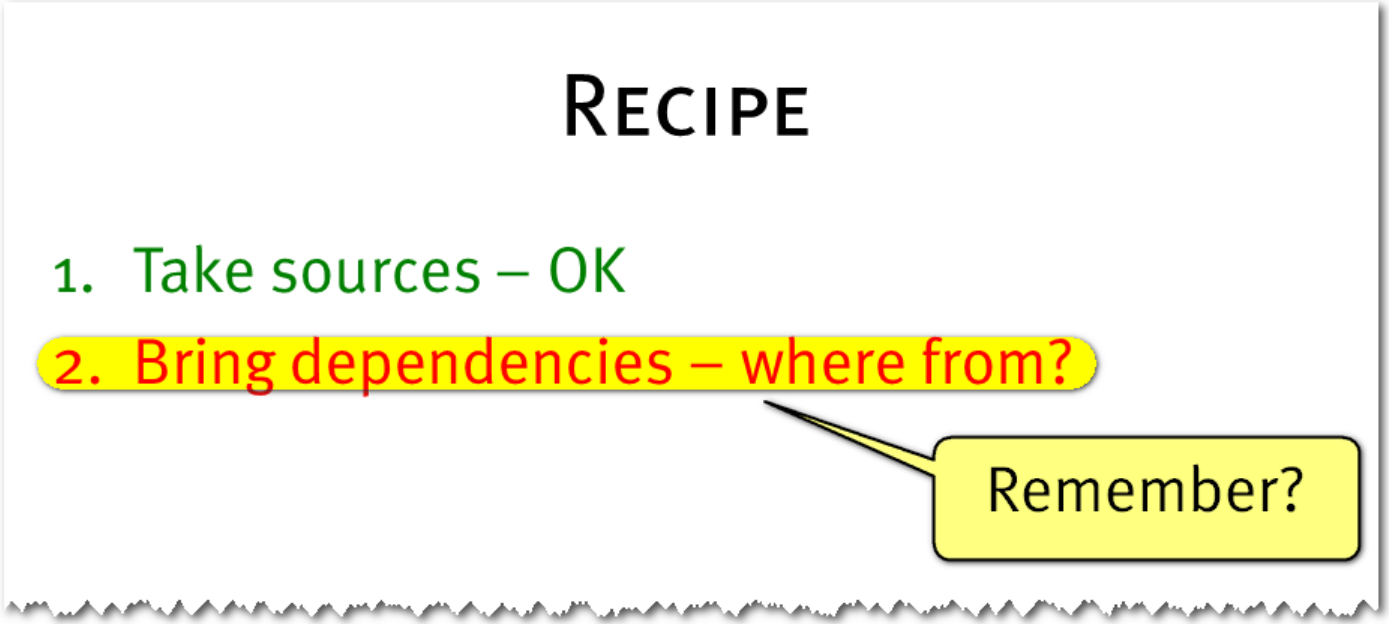
Phantomwhale
511 ●4 ●17

Wouldn't mind knowing this myself. It looks like the whole of rubygems.org in down - what a pain. – Dom 웃
Jan 1 '12 at 13:37


stackoverflow
Questions
Tags
Users
Badges
Unanswered
What to do when rubygems.org is down?
I have to setup a rails project and rubygems.org is seemed to be down. That's really horrible. Can't believe it the whole ruby community have only one single not-so-reliable gems source. What should I do in such case?
2
ruby-on-rails
rubygems
bundler
share | edit | flag
asked Feb 18 '12 at 1:03
Phương Nguyễn
2,492 5 23 51
add comment
start a bounty

You got the idea,
you can't rely on rubygems.org

Let's try it again...

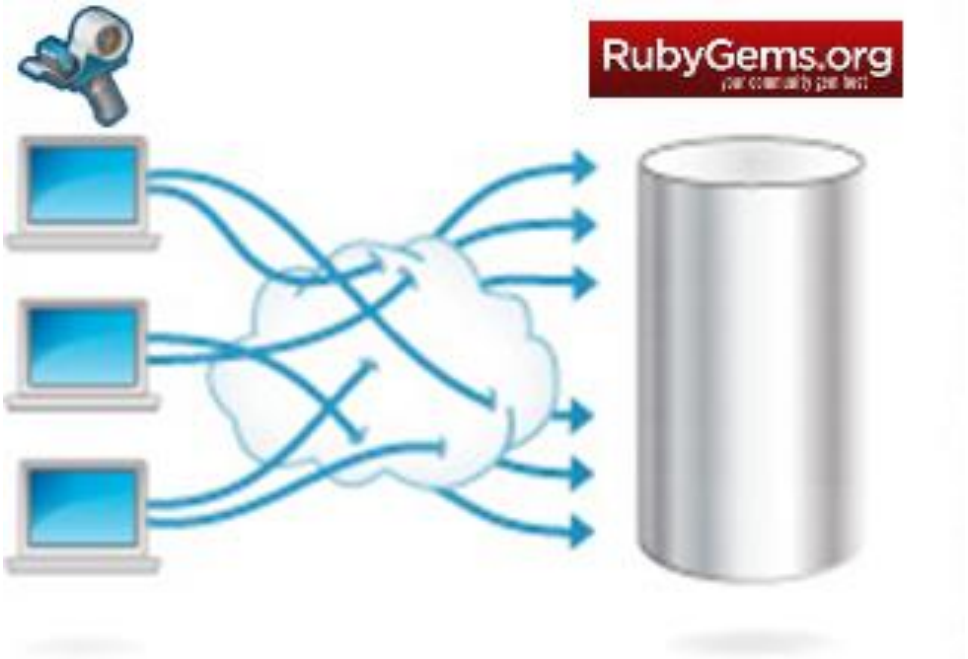


Binary Repository as Modules Source

Hint!

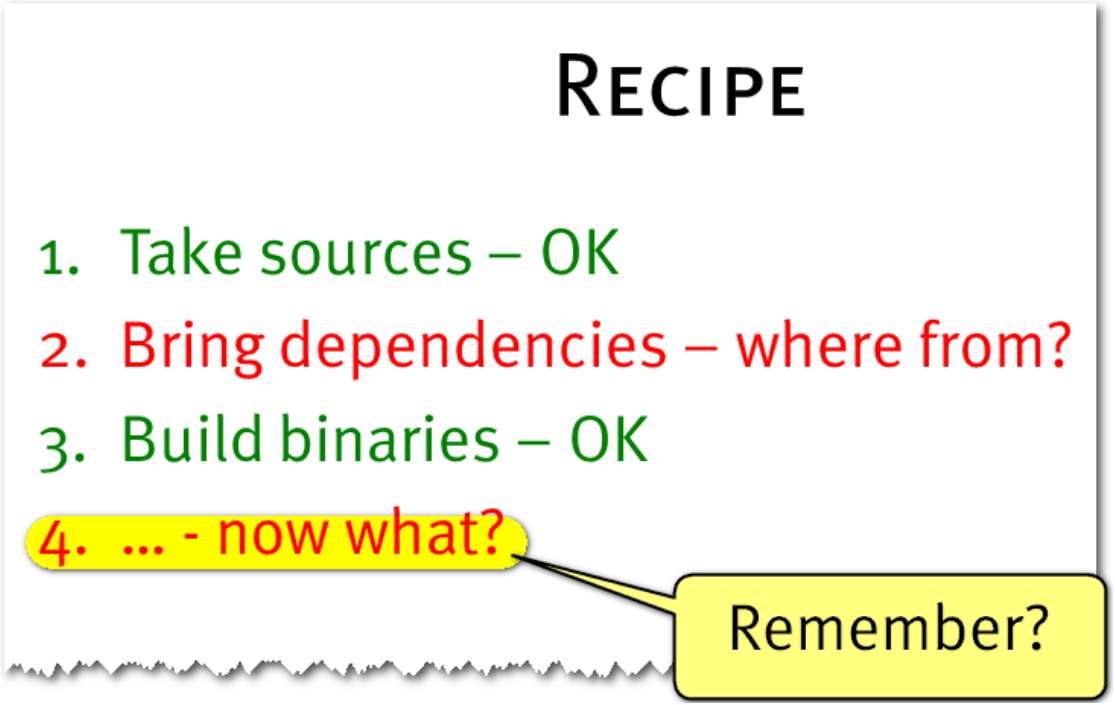
Binary Repository as Modules Source

Before



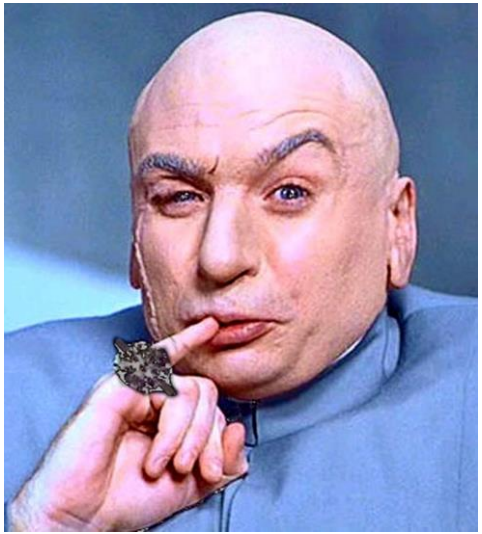
After

Binary Repository as Deployment Target

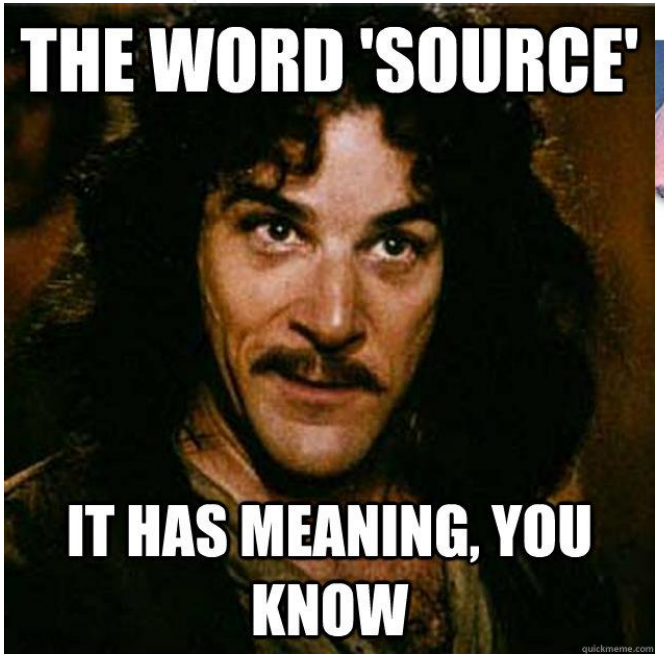


Binary Repository as Deployment Target

Wait a Minute, What's Wrong With My Source Control System?!



Wait a Minute, What's Wrong With My Source Control System?!



Sources vs. Binaries

Sources	Binaries

Sources vs. Binaries

Sources	Binaries
Text	Blob

Sources vs. Binaries

Sources	Binaries
Text	Blob
Diffable	Not diffable

Sources vs. Binaries

Sources	Binaries
Text	Blob
Diffable	Not diffable
Versioned by content	Versioned by name

Sources vs. Binaries

Sources	Binaries
Text	Blob
Diffable	Not diffable
Versioned by content	Versioned by name
Stored by override	Should never override

Versioning By Content

MyPoem.txt
(rev. 01)

Versioning By Content

MyPoem.txt
(rev. 02)

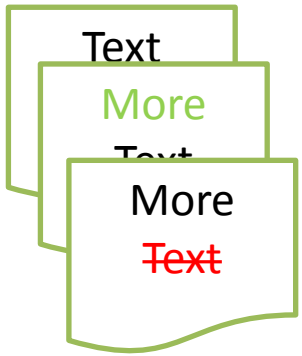
Versioning By Content

MyPoem.txt
(rev. 03)

Versioning By Content

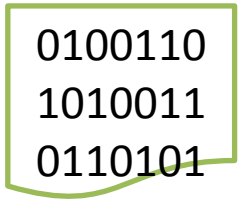
MyPoem.txt
(HEAD)

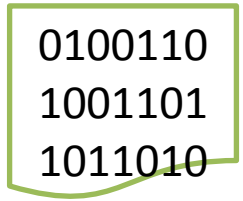
Mismatch

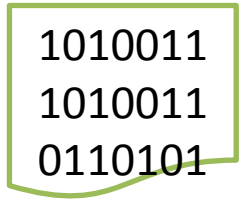


MyPoem.txt

VS.







MyBook-1.0.zip

MyBook-1.1.zip

MyBook-2.0.zip

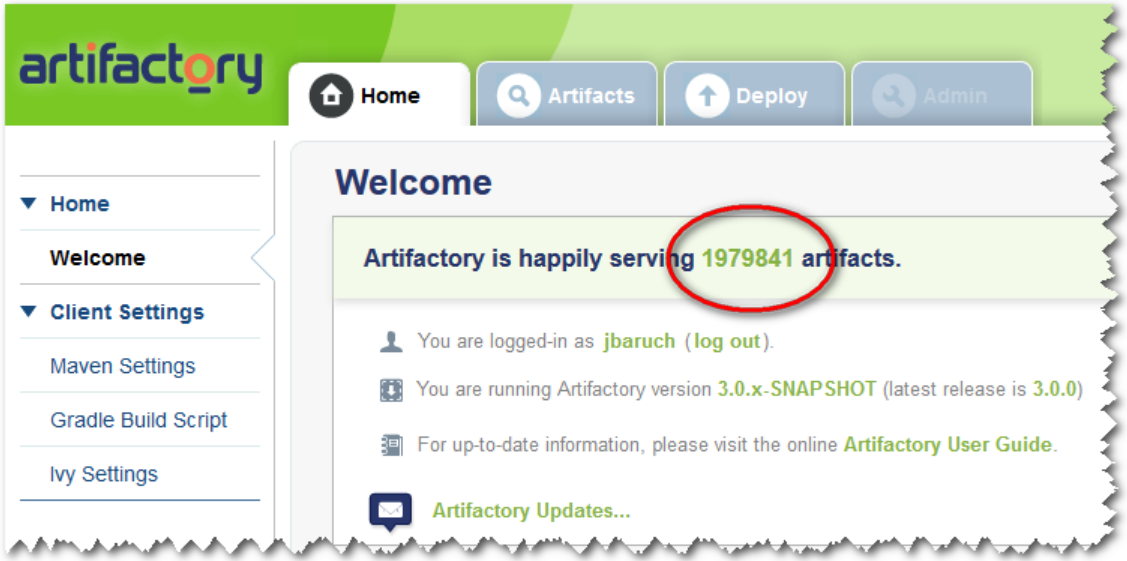
quickmeme.com

SOMEONE WILL STAND UP...
quickmeme.com

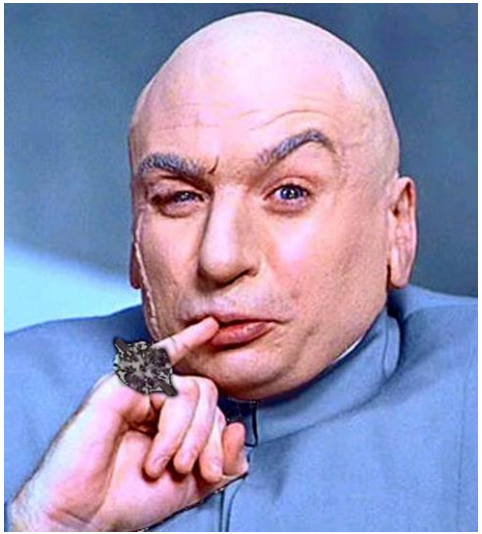
SOMEONE WILL STAND UP...
AND SAY THAT GIT
DOESN'T STORE DIFFS!
quickmeme.com

Git is a Distributed System

R U SURE U WANT 2 CLONE IT ALL?



OK Then, But What's Wrong With My File Server?!



RubyGems Guides

← PREVIOUS NEXT →

Run your own gem server

There are times you would like to run your own gem server. You may want to share gems with colleagues when you are both without internet connectivity. You may have private code, internal to your organization, that you'd like to distribute and manage as gems without making the source publicly available.

There are a few options to set up a server to host gems from within your organization. This guide covers the `gem server`

It's Fine if it knows how to:

It's Fine if it knows how to:

Optimize storage size

It's Fine if it knows how to:

Proxy other repositories

Optimize storage size

It's Fine if it knows how to:

Proxy other repositories

Expose REST API

Optimize storage size

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Optimize storage size

Enforce Module Security

It's Fine if it knows how to:

Proxy other repositories

Expose REST API

Manage artifact lifecycle

Optimize storage size

Enforce Module Security

It's Fine if it knows how to:

Proxy other repositories

Expose REST API

Manage artifact lifecycle

Optimize storage size

Cleanup SNAPSHOTS

Enforce Module Security

It's Fine if it knows how to:

Proxy other repositories

Expose REST API

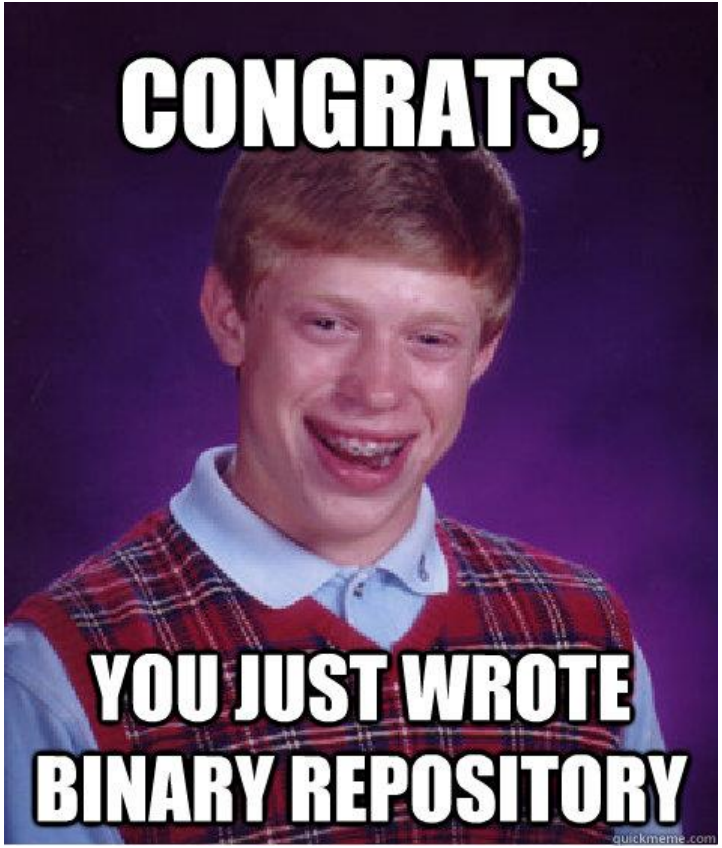
Manage artifact lifecycle

Optimize storage size

Cleanup SNAPSHOTS

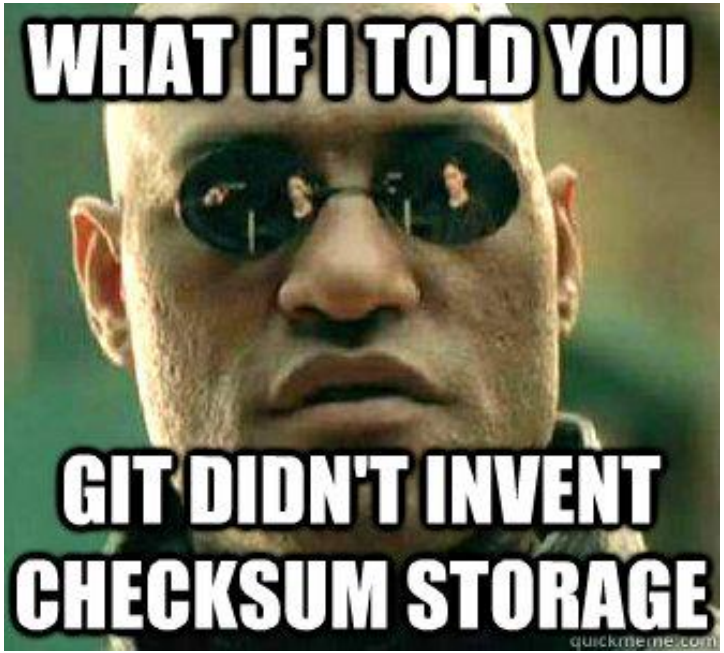
Enforce Module Security

Search by name, context and content

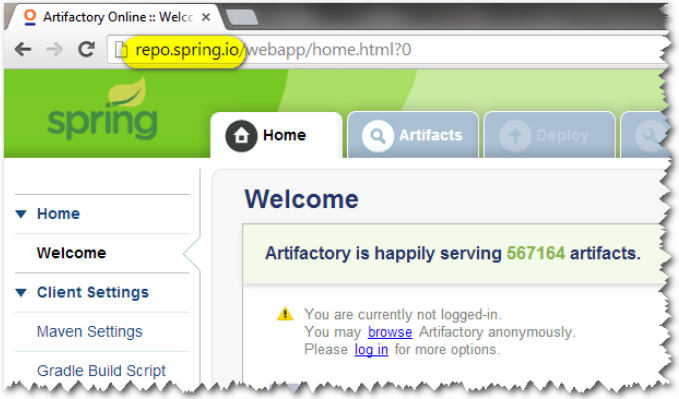


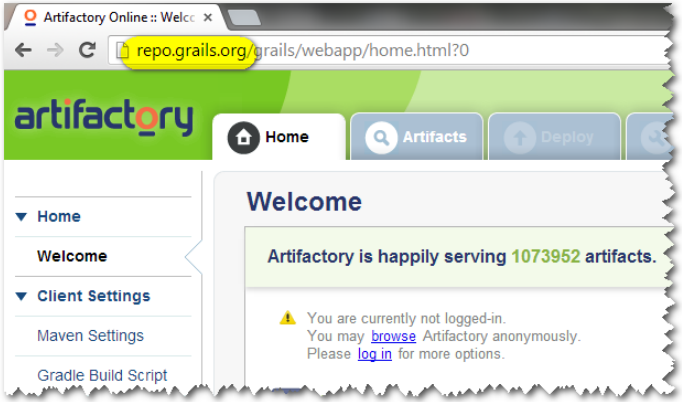
BTW, How Many Years It Took?

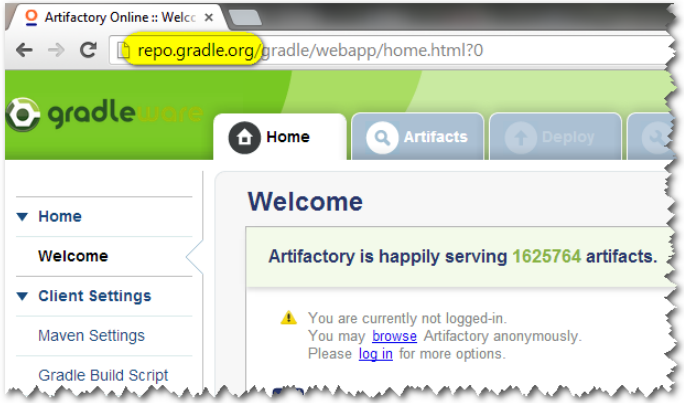
Optimizing Storage Size


WHAT IF I TOLD YOU
GIT DIDN'T INVENT
CHECKSUM STORAGE
quickmeme.com

Meet Artifactory







Meet Artifactory

Java? Yuck!

Ohloh
Projects
People
Project Summary
Tags
In a Nutshell, Artifacto
Sign In
Join Now
Apache Archiva
EBuild
26%
9%
Lines of Code

- SLOW?

- FAST!
  - ON MODERN HOTSPOT

- FAST!
  - ON MODERN HOTSPOT
- COMPLICATED?

- FAST!
  - ON MODERN HOTSPOT
- SOPHISTICATED!
  - DEPENDENCY MANAGEMENT DONE RIGHT SINCE 2007

- SOPHISTICATED!
  - DEPENDENCY MANAGEMENT DONE RIGHT SINCE 2007
- ENTERPRISY?

- YOUNG AND KICKING!

Ruby

Groovy

Ruby

Ruby On Rails

Groovy

Grails

Ruby
Ruby On Rails
Sinatra

Groovy
Grails
RatPack

Gems

Jars

Gems

RubyGems.org

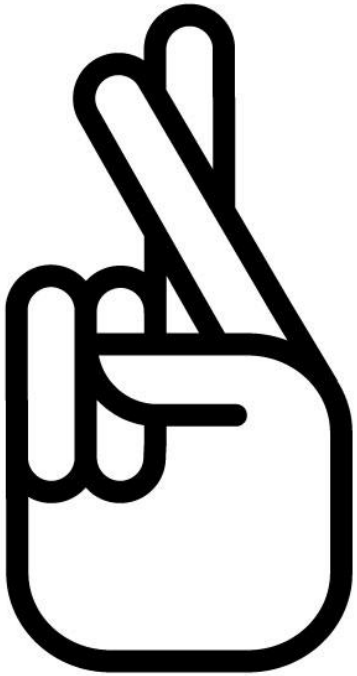
Jars

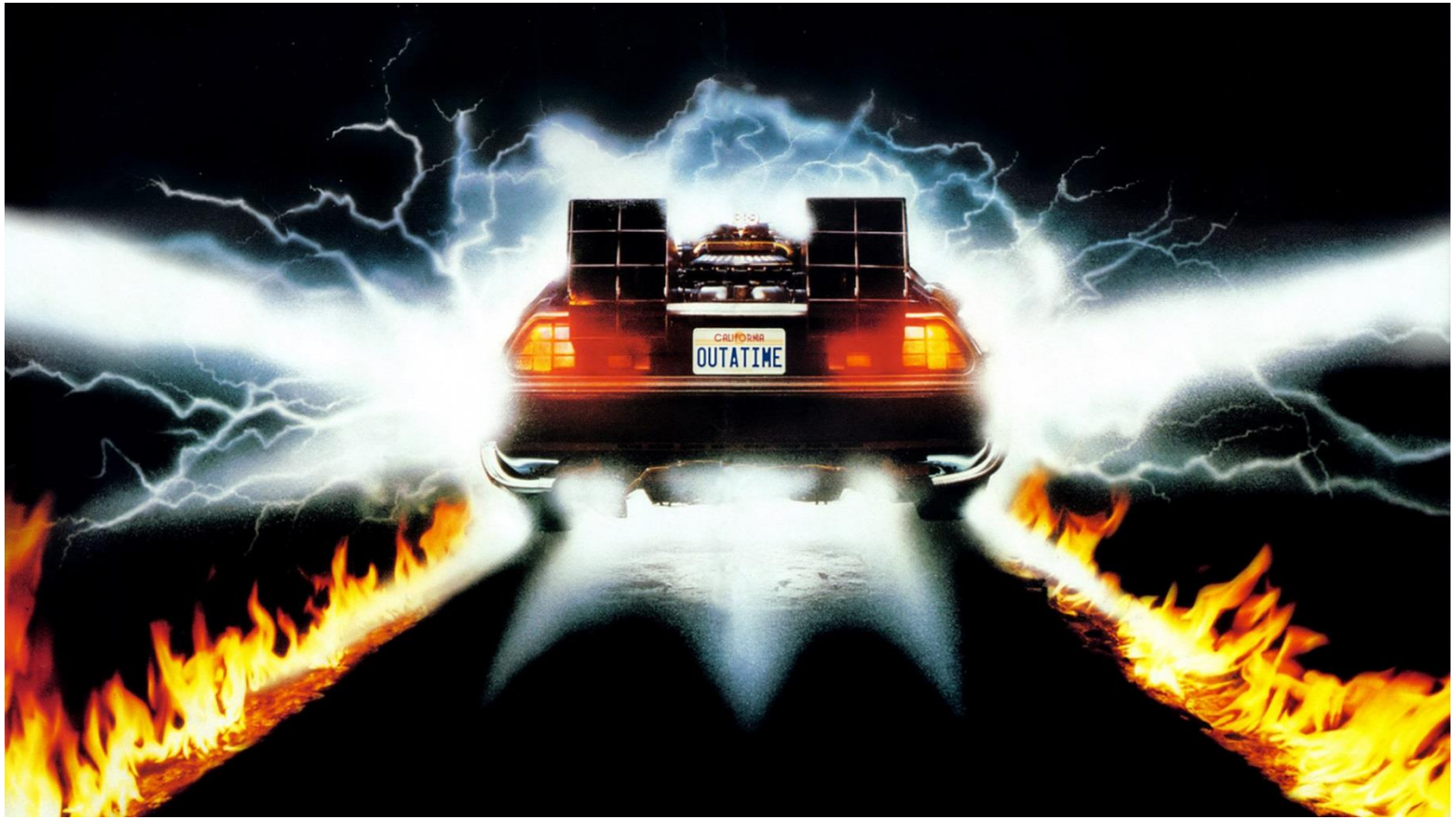
Maven Central

Gems
RubyGems.org
Artifactory

Jars
Maven Central
Artifactory

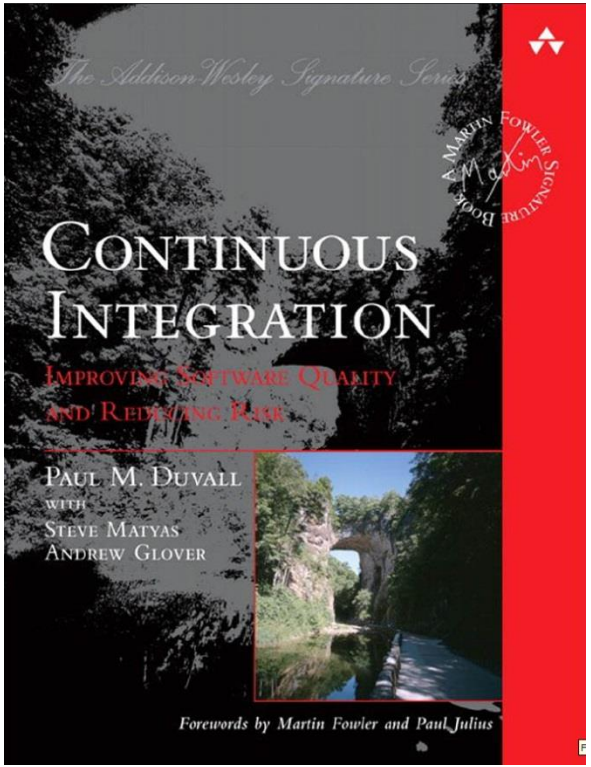
Demo Time!




CALIFORNIA
OUTATIME

CIA

Continuous Integration Automation



CI SERVERS CHECK OUT CODE , RUN BUILD TOOLS...

Joel on Software

Daily Builds Are Your Friend

by Joel Spolsky

Saturday, January 27, 2001

In 1982, my family took delivery of the very first IBM-PC in Israel. We actually went down to the warehouse and waited while our PC was

Here's how to do them. You need a daily build server, which will probably be the fastest computer you can get your hands on. Write a script which checks out a complete copy of the current source code from the repository (you *are* using source control, aren't you?) and then builds, from scratch, every version of the code that you ship. If you have an installer or setup program, build that too. Everything you ship to customers should be produced by the daily build process. Put each build in its own directory, coded by date. Run your script at a

...and show Chuck Norris Quotes.

NO PROBLEM
Troll.me

Most Important

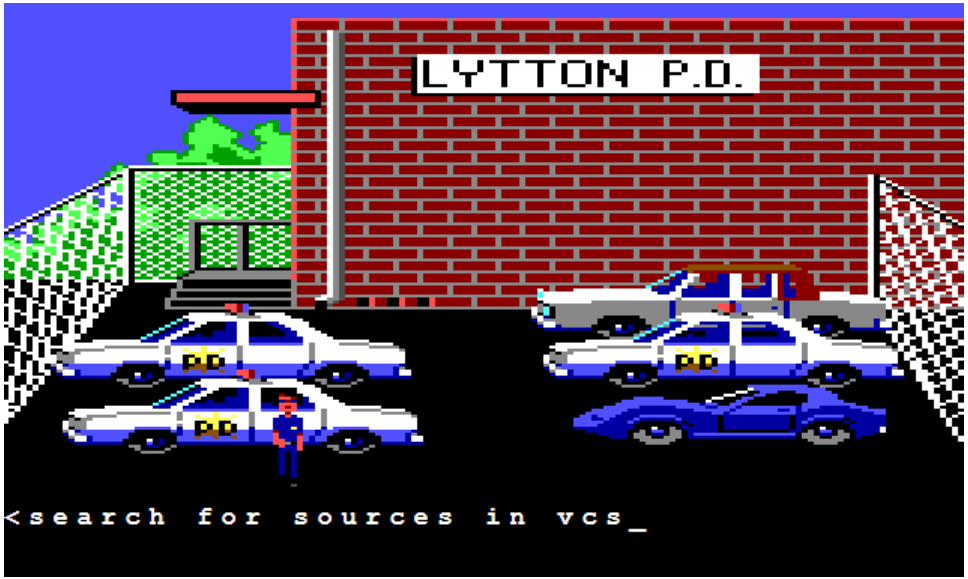
Why do I care?

Reason #1

TRACEABILITY

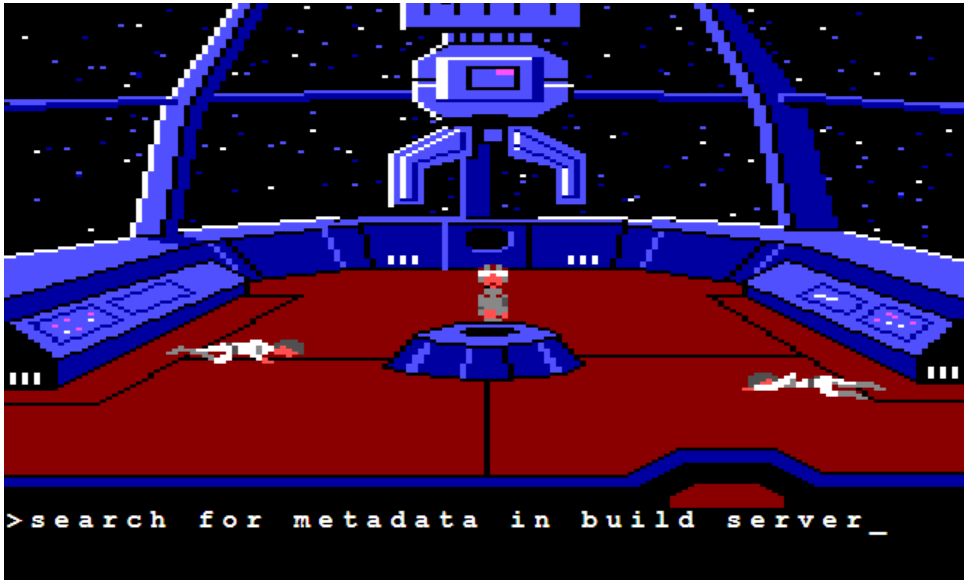
The Time Machine

Quest for Traceability

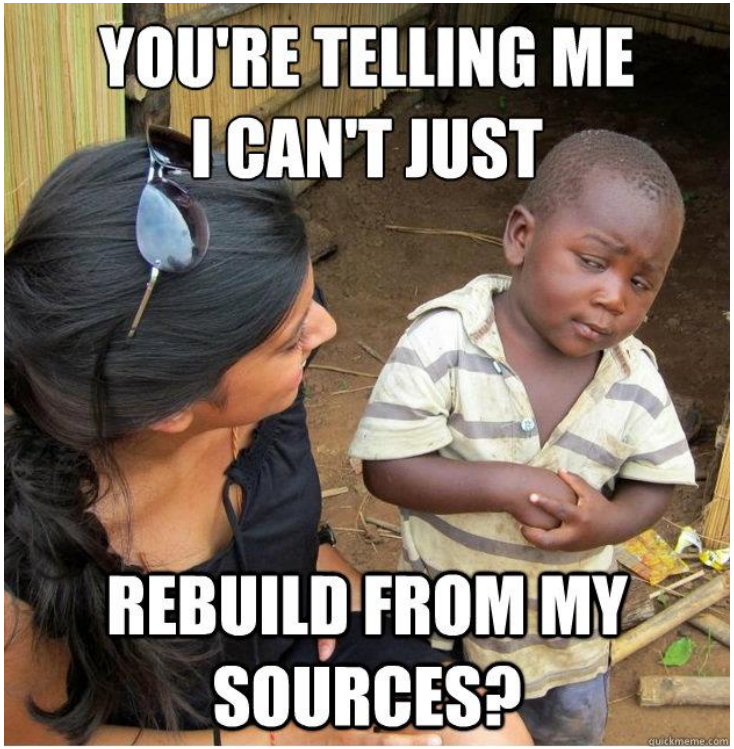


Quest for Traceability

Quest for Traceability



What's the problem?



- CHECKOUT BRANCH/TAG/REVISION

- CHECKOUT BRANCH/TAG/REVISION

- BUILD

- CHECKOUT BRANCH/TAG/REVISION

- BUILD

- DONE

- CHECKOUT BRANCH/TAG/REVISION WON'T WORK!
- BUILD
- DONE

- CHECKOUT BRANCH/TAG/REVISION

WON'T WORK!

- BUILD

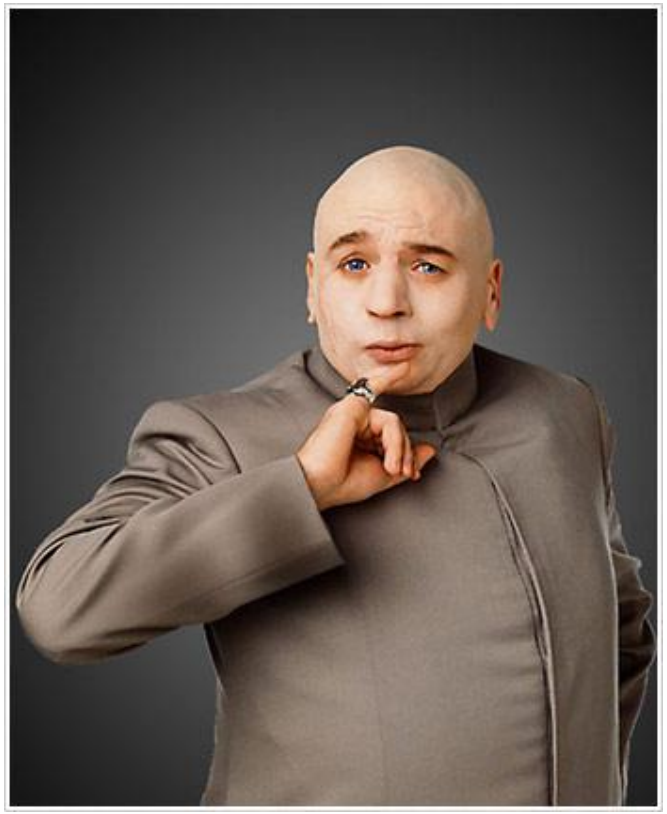
- TIME CONSUMING

- DONE

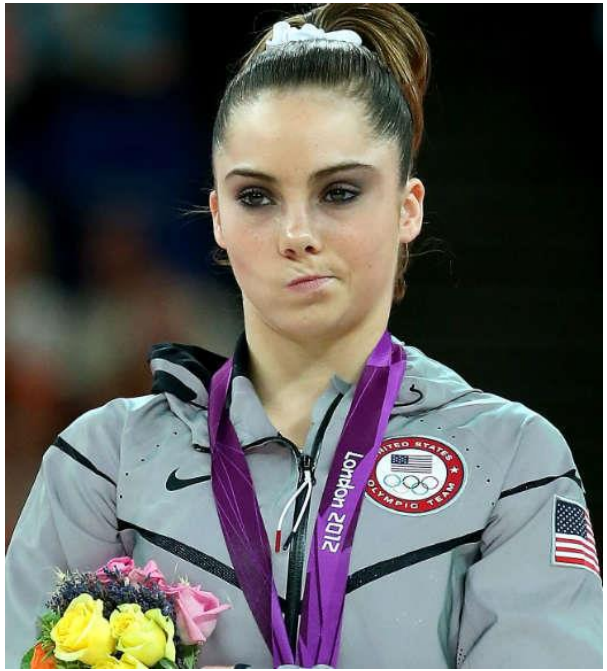
- CHECKOUT BRANCH/TAG/REVISION WON'T WORK!
- BUILD - TIME CONSUMING
- DONE - UNSTABLE

Dependencies Lie

Evil Dependencies Resolution

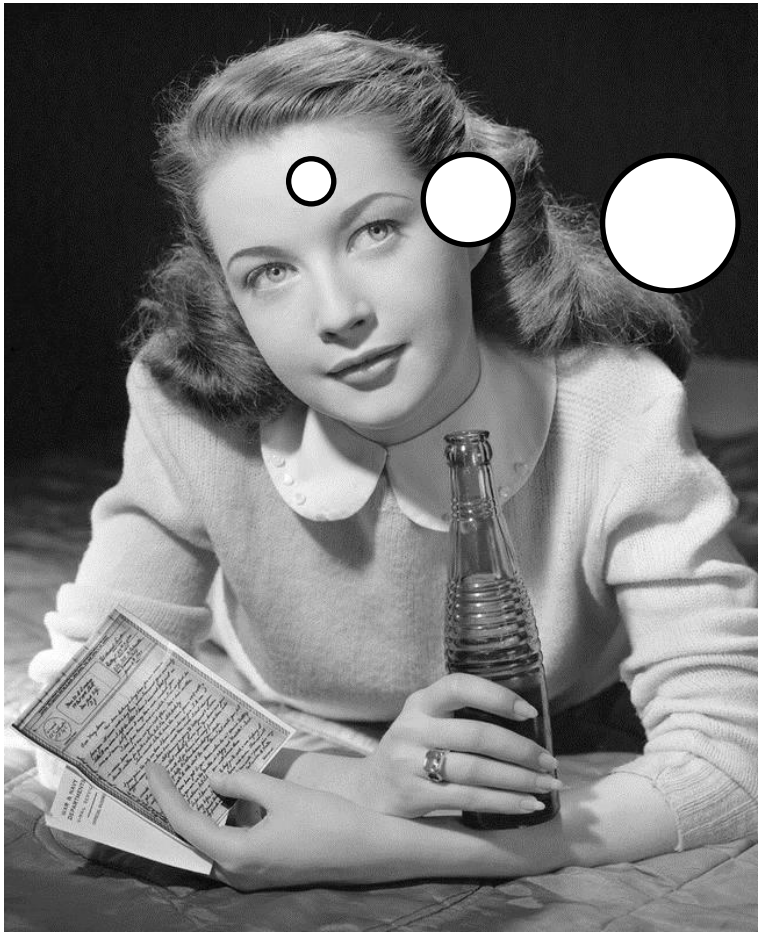


We can do better!



Remember? Build Server:

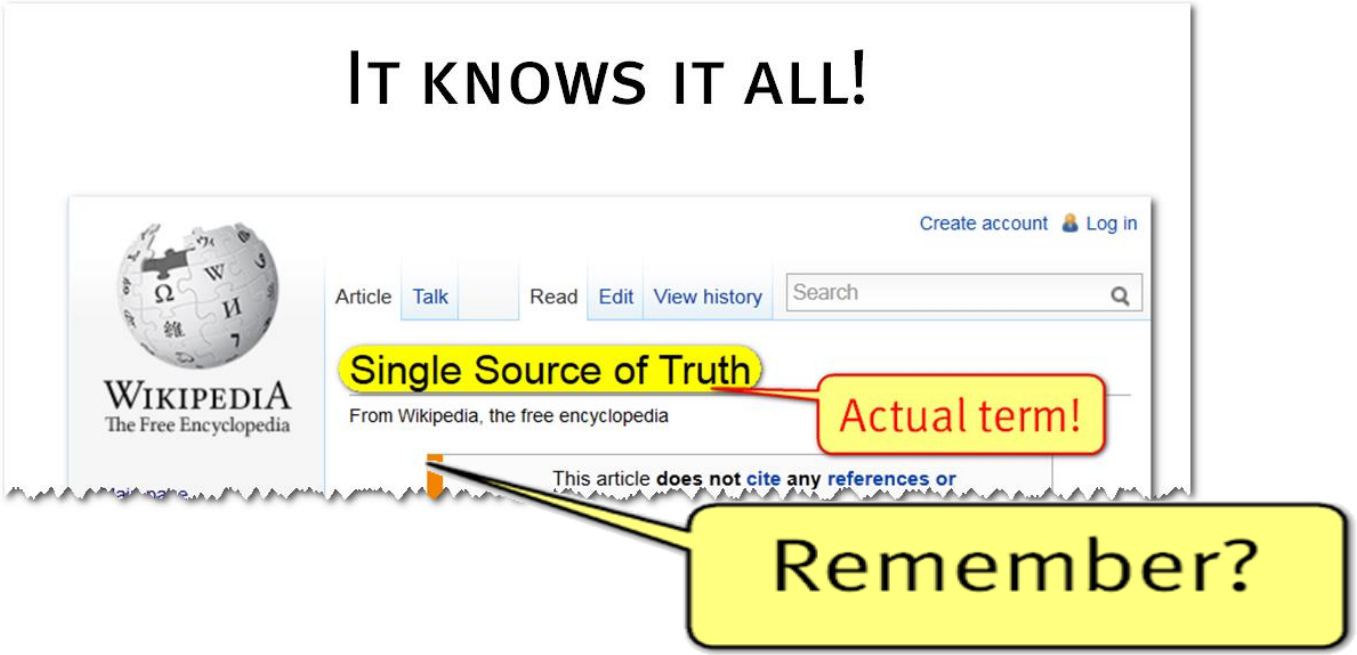
It knows it all!



Wouldn't it be dreamy if there was a way to capture this truth?

Binary Repository and CI/CD

CI Server is the Single Source of Truth



Binary Repository is The Single Target of Truth

Save the Truth!

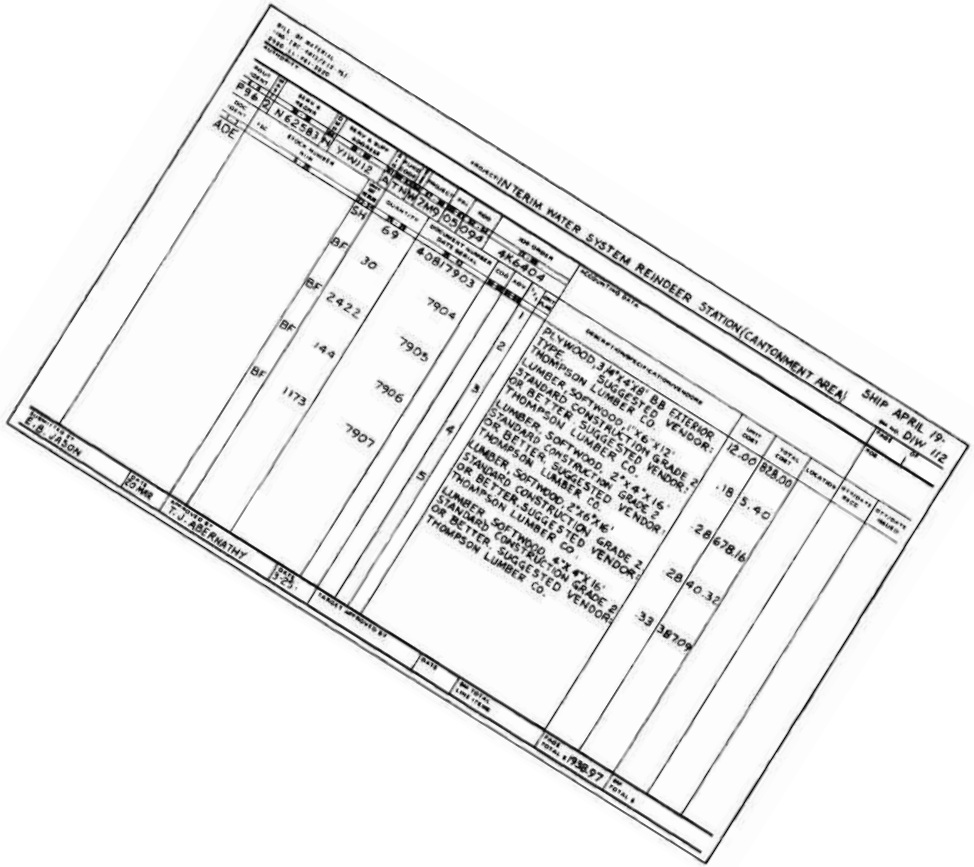
Make Strange Binary Love

Binaries + Build Info

=

2gEtHeR 4eVa!!!1

Standard of Truth



How Everything Fits Together

How Everything Fits Together

How Everything Fits Together

How Everything Fits Together

How Everything Fits Together

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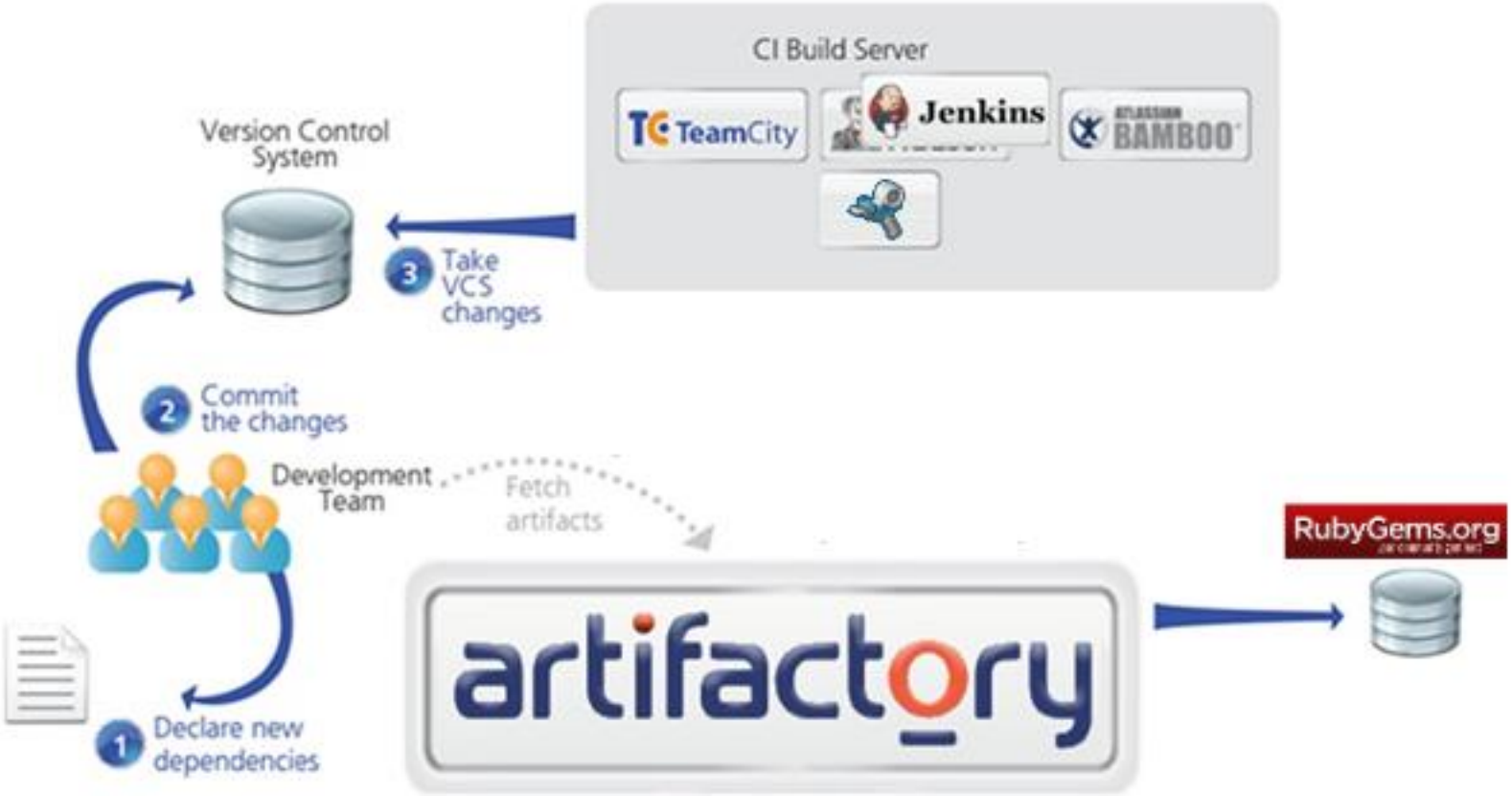

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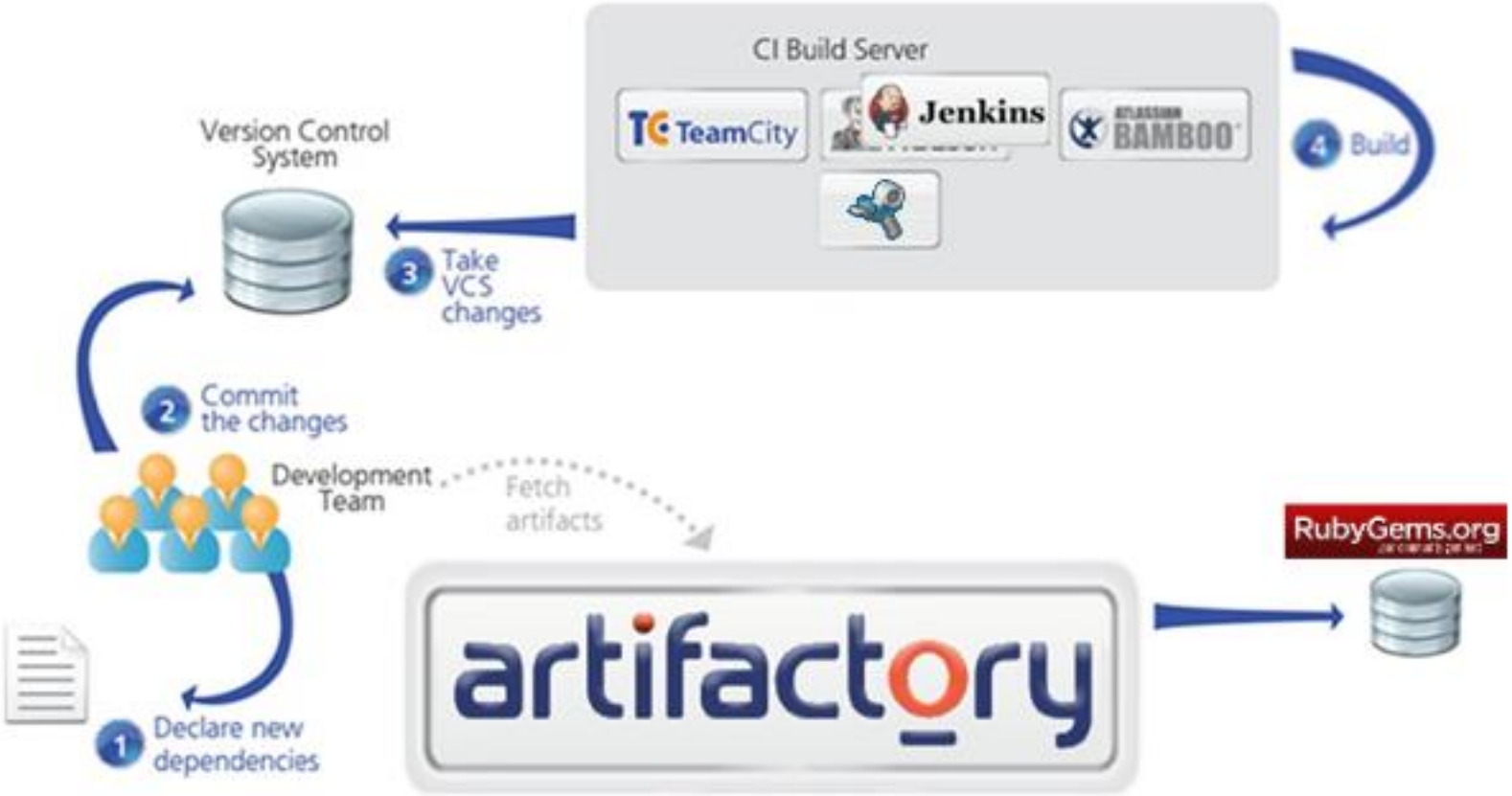

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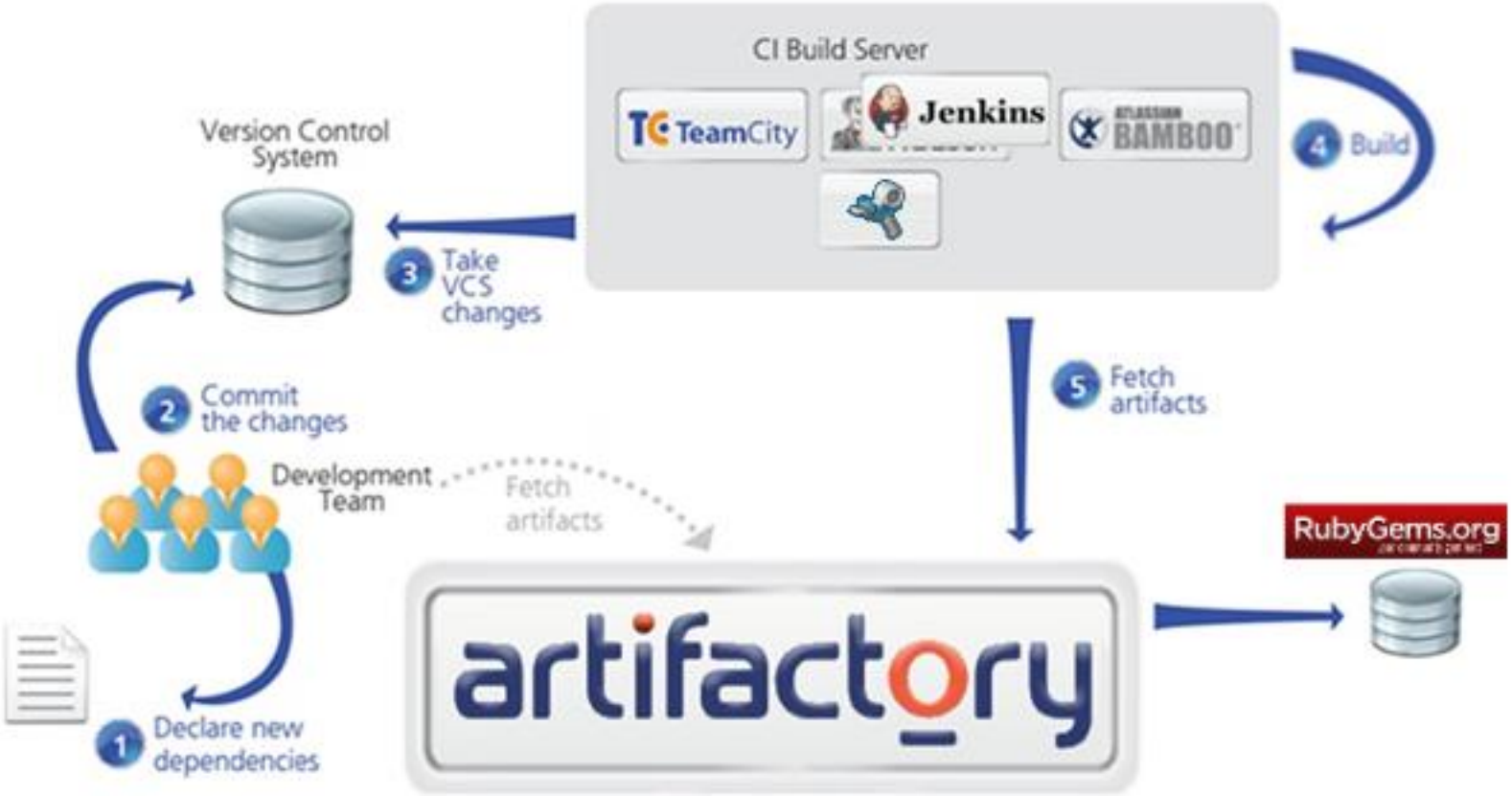

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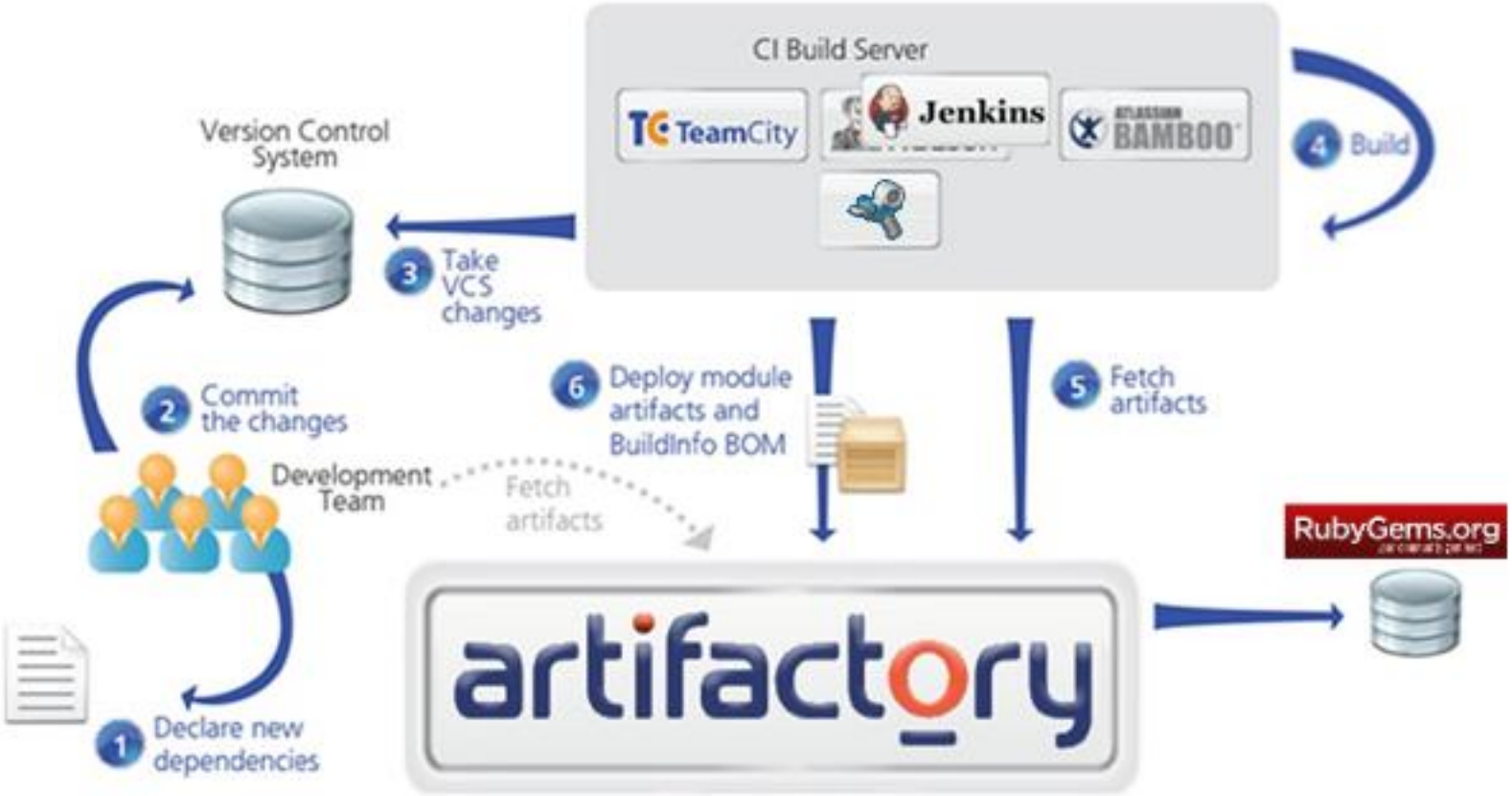

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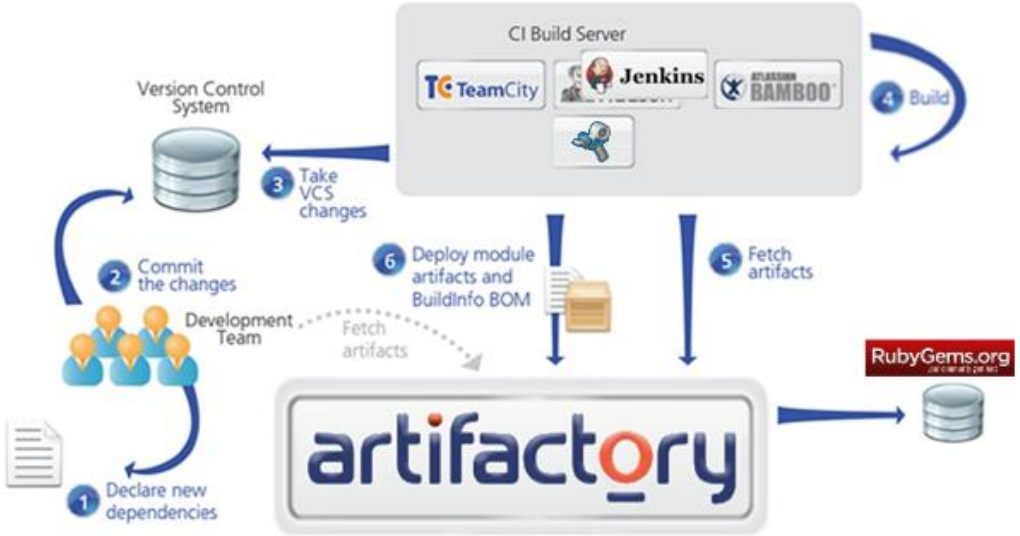

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