

Ruby Plugins

You've come a long way baby



Charles Lowell

- `cowboyd@github`
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What the hell am I
doing here?

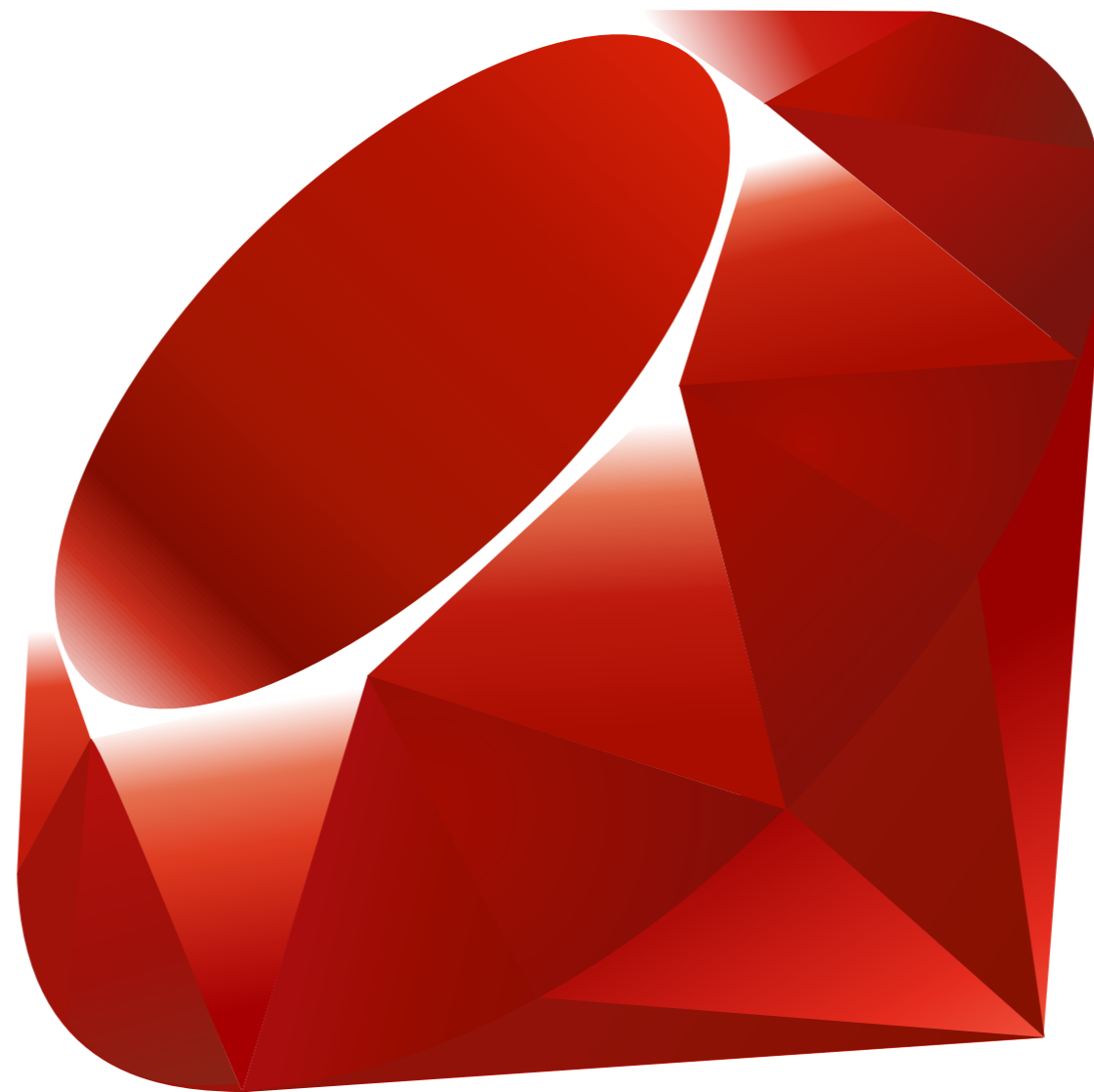




User Interfaces



Lots of Ruby



Lot's of JavaScript



Lot's of Java/C++



+



therubyracer, therubyrhino

Bugs!

- Ruby versions (1.8.6, 1.8.7, 1.9.2, rbx, jruby, ...)
- CC/libc version
- OS (OSX, ubuntu, rhel)

HELL



We need a **DIESEL**
CI solution.





Fun Fact: We
actually designed
this logo



Configuration Matrix

	rbx	1.8.6	1.8.7	1.9.2	jruby
OSX-10.5					
OSX-10.6					
Ubuntu-11.04-amd64					
Ubuntu-11.04-x86					
CentOS-5.1-amd64					
Windows-Vista-amd64					
Windows-7					

jenkins.rb 0.1

- rubygem containing jenkins.war
- utility for starting a test jenkins server

Dr Nic



- Saw my lightning talk
- went hog wild on the gem

jenkins.rb 1.0



- create/list/update jobs from CLI
- create sinatra/rails jobs in one go
- huge arsenal of Jenkins Macros

Eventually, we wanted
more than macros.



Ruby Plugins

Extend Jenkins with nothing but Ruby





We need a plan





How 'bout
you do it?



We need a plan



Mad Propers!

Kohsuke Kawaguchi



Ruby Plugins

See them in action



```
legolas:~ cowboyd$ █
```

```
I
```

What does it mean for
a plugin to be in Ruby?



Language

Ruby.
Duh.



API

must “feel” like Ruby, not just scripting Java.



Example

“Push” vs “Pull” configuration



Java

```
public class SomeAction implements RootAction {  
    public String getIconFileName() {  
        return "gears.png";  
    }  
  
    public String getDisplayName() {  
        return "Some Action";  
    }  
  
    public String getUrlName() {  
        return "something";  
    }  
}
```

Scripted Java

```
class SomeAction < Java.hudson.model.RootAction
  def icon_file_name
    "gears.png"
  end

  def display_name
    "Some Action"
  end

  def url_name
    return "something"
  end
end
```

Ruby

```
class SomeAction < Jenkins::Model::RootAction
  display_name "Some Action"
  icon_filename "gears.png"
  url_name     "something"
end
```

Tools

They've gotta be Ruby too.



-Maven -javac

- Rake - build and assembly
- Bundler - dependency management
- jpi - development tools

Testing

Yup, also Ruby



No solid answers yet

- unit testing?
- mocking builds, jobs, projects?
- fixtures for builds, jobs, projects?

How it works

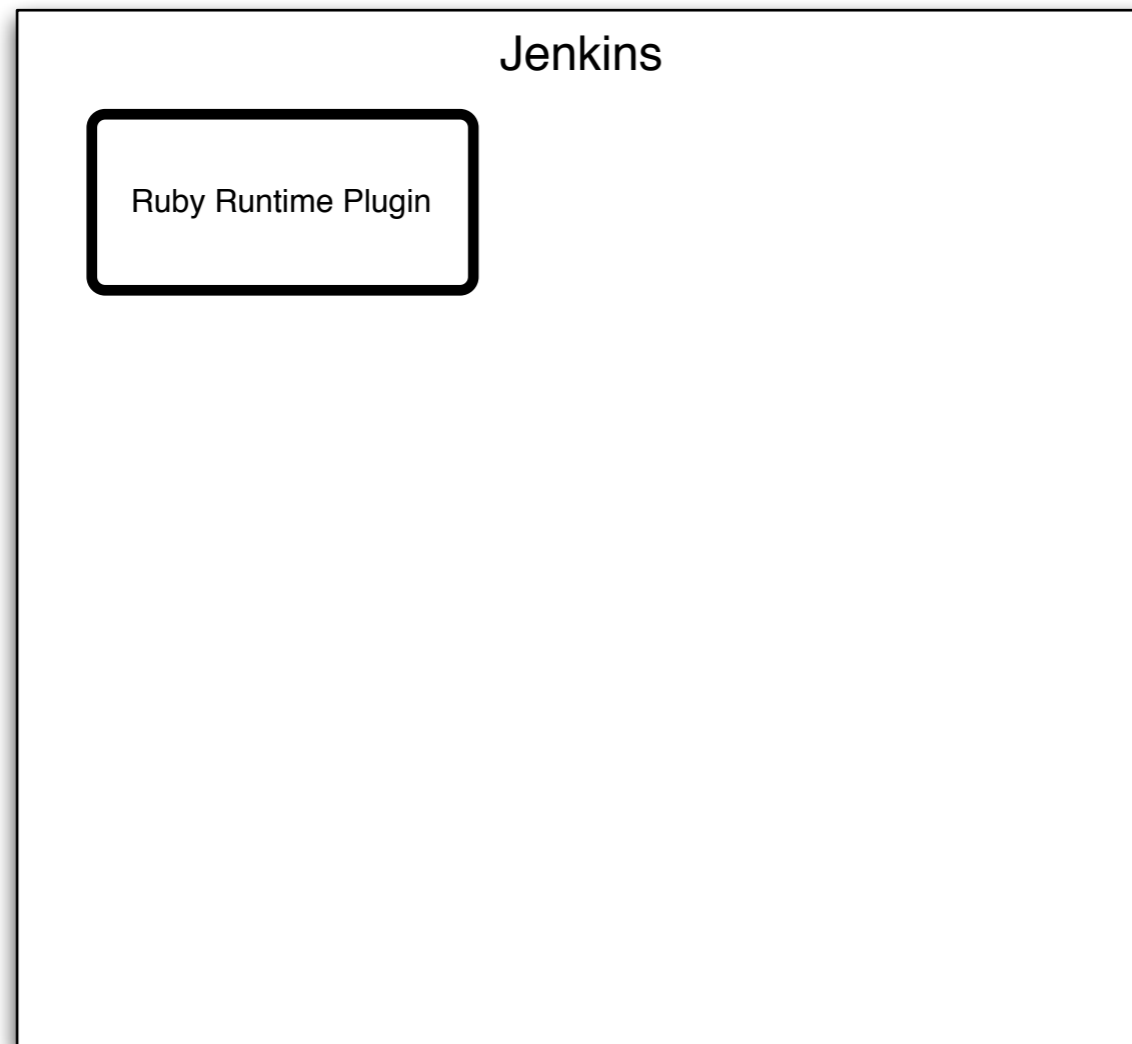


How it works

Plugin.java

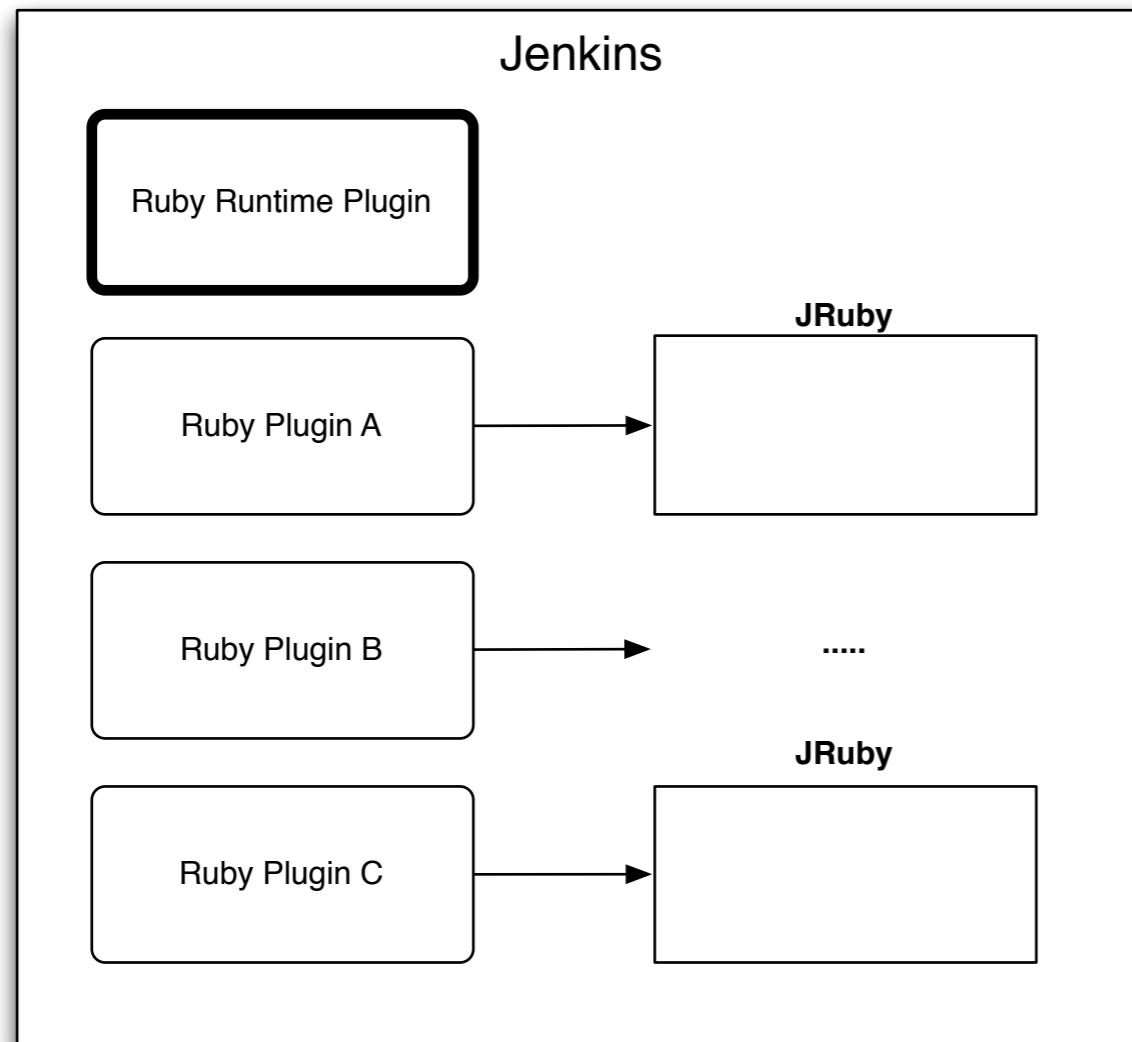


Plugin.java



- Small as can possibly be
- 5 small classes
- will not instantiate extension points

Plugin.java



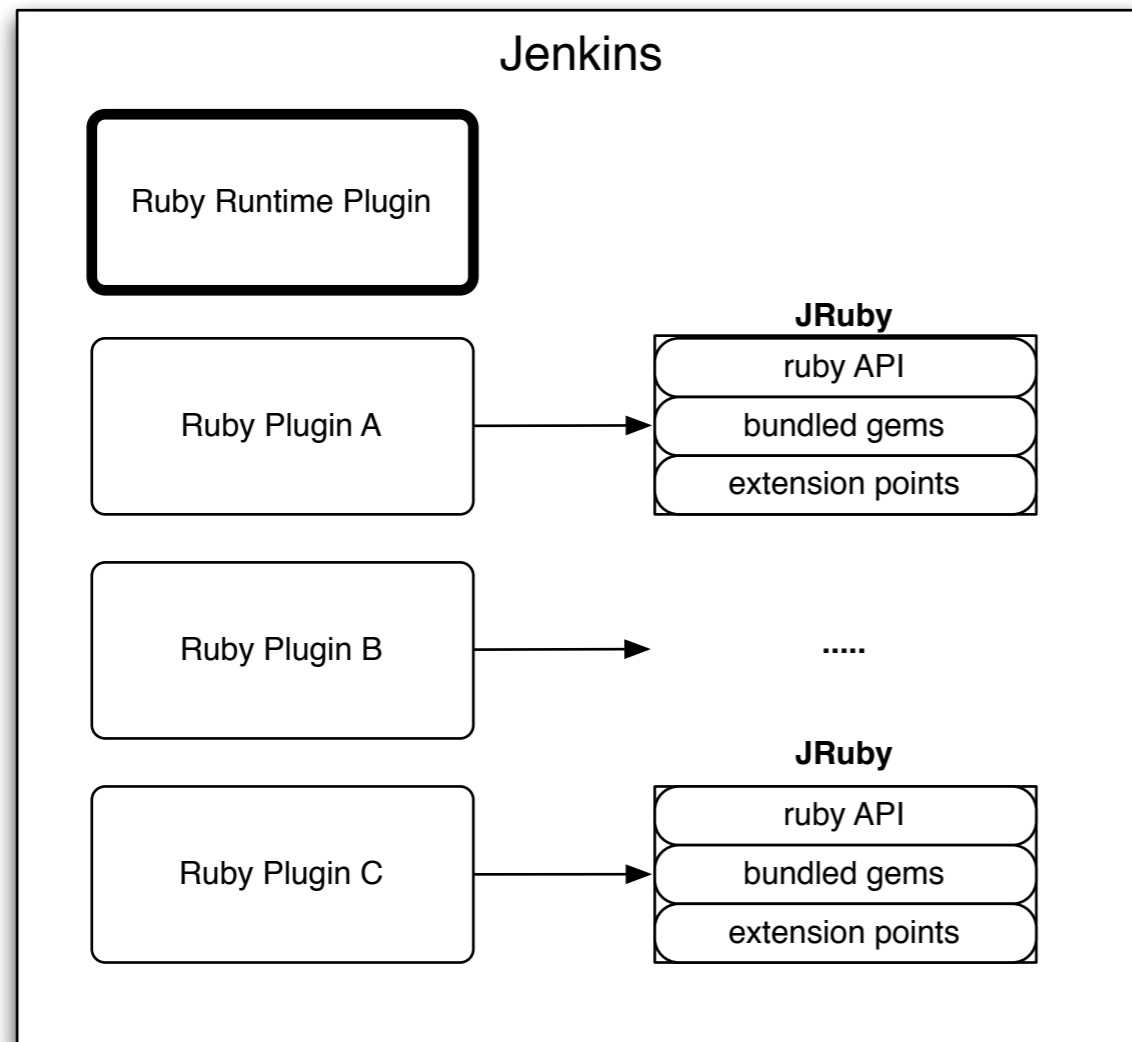
- every plugin gets its own scripting container
- isolation + backwards compatibility

How it works

Plugin.rb

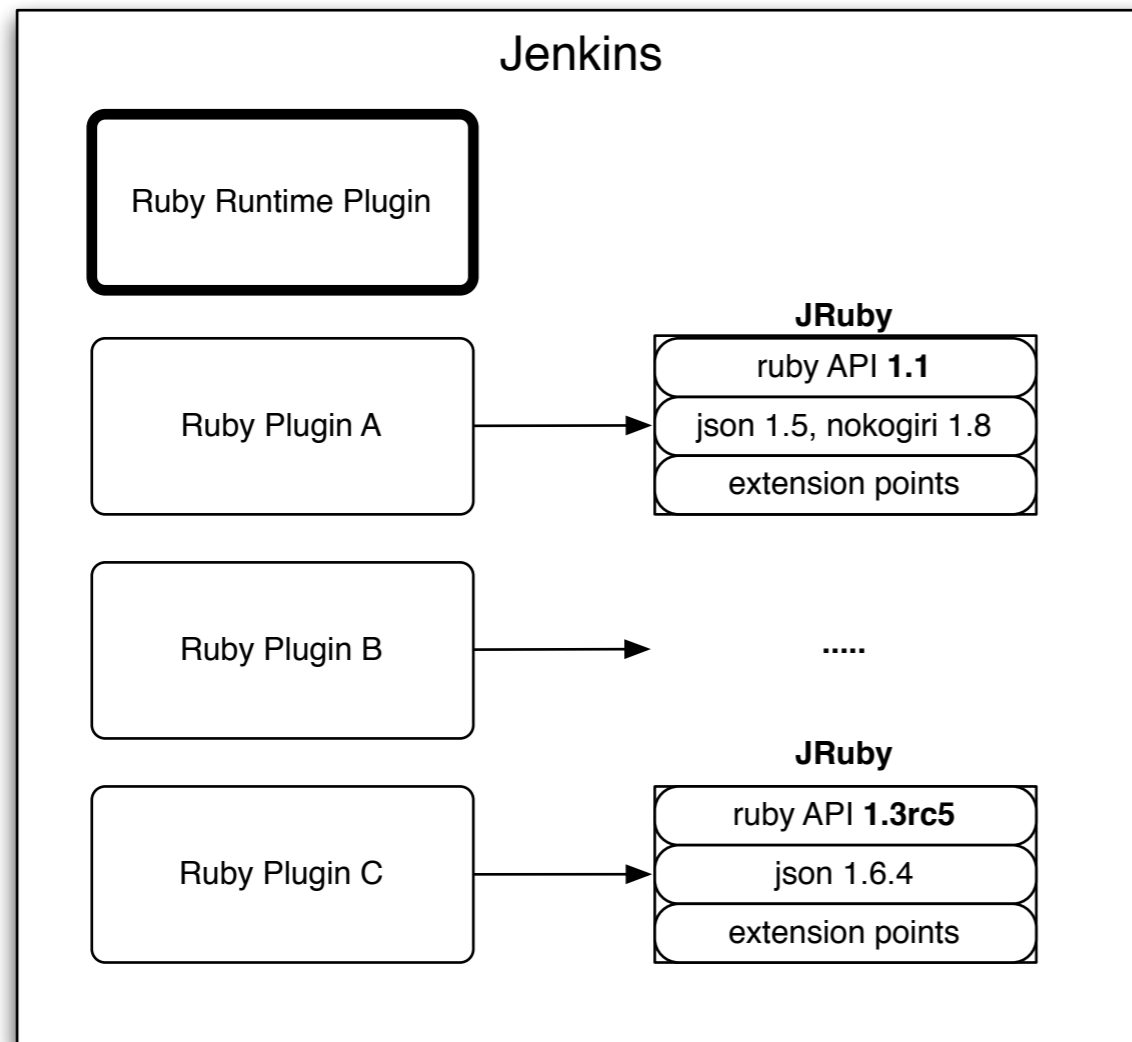


Plugin.rb



- own copy of API
- own copy of gems
- Ruby extension points detected and auto-loaded

Plugin.rb



- Library code is free to vary from plugin to plugin
- This includes the plugin API!

Plugin.rb (API)

- Builder - implement build steps
- Publisher - run build steps after build complete
- BuildWrapper - decorate a build with setup/teardown

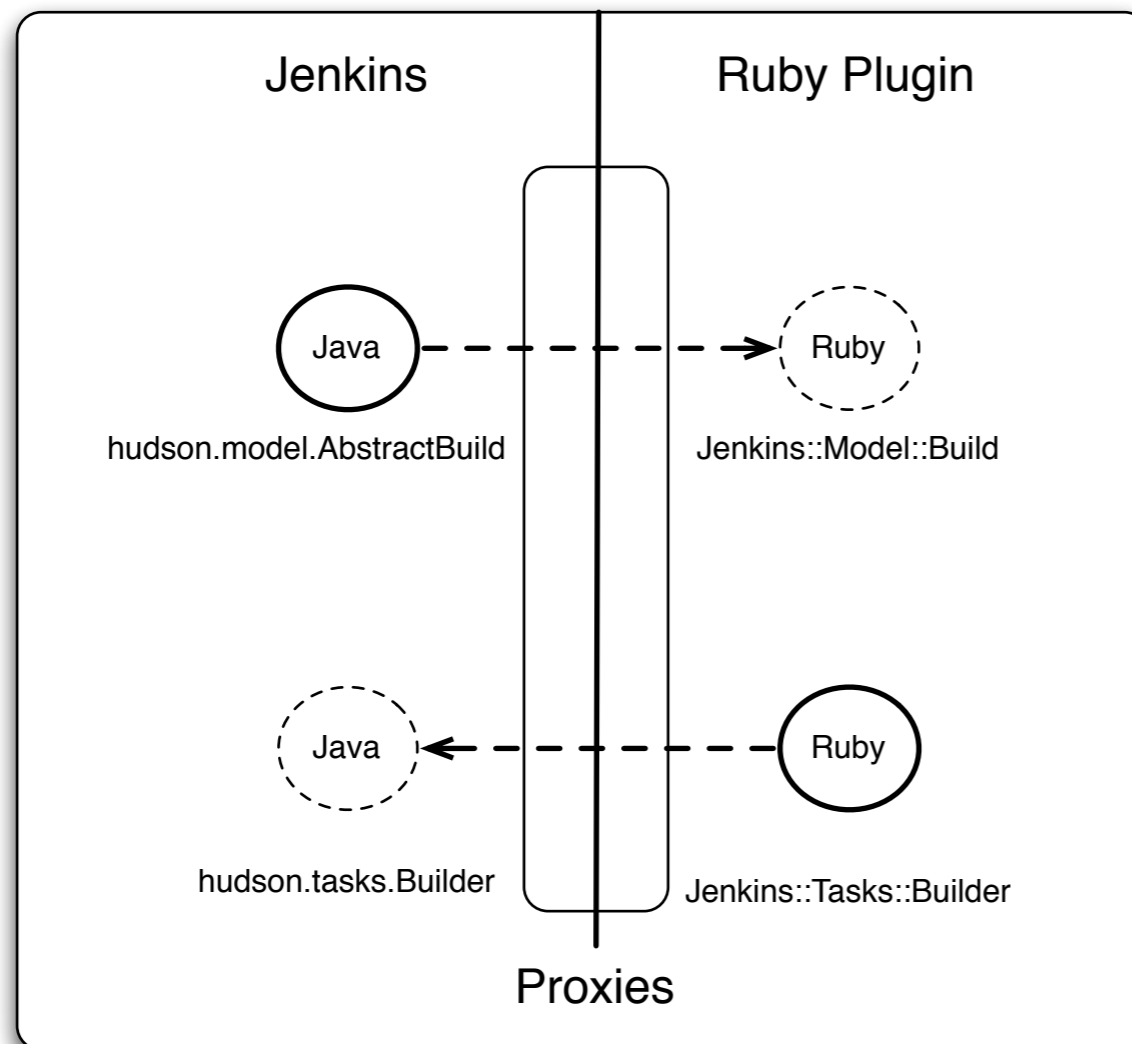


Plugin.rb (API)

- All Ruby extension points are Plain old Ruby objects (TM)
- Plugin maintains two-way list of proxies to support this



Plugin.rb (API)



- All Java Objects proxied
- All Ruby Objects wrapped
- referential integrity

More Fundamental than Ruby



Supporting Features

- Flexible Descriptor registration
- Pluggable persistence via JRuby Xstream
- Stapler support for pluggable templating



Supporting Features

More plugin-provided metadata. Less Java reflection.



What works for Ruby...

works for Python



What works for Ruby...

works for Python

(in theory)



What works for Ruby...

works for Python

(in theory)

but not as magnificently :)



What works for Ruby...

works for JavaScript



What works for Ruby...

works for Clojure



What works for Ruby...

works for Fantom



What works for Ruby...

works for X



400+ Plugins

to date



4,000 plugins



4,000 plugins

sooner than you think?



Applications?



Frameworks?



gem install jenkins-plugin

Thanks!

- [cowboyd@github](#)
- [cowboyd@twitter](#)
- [cowboyd@jenkins-ci](#)

