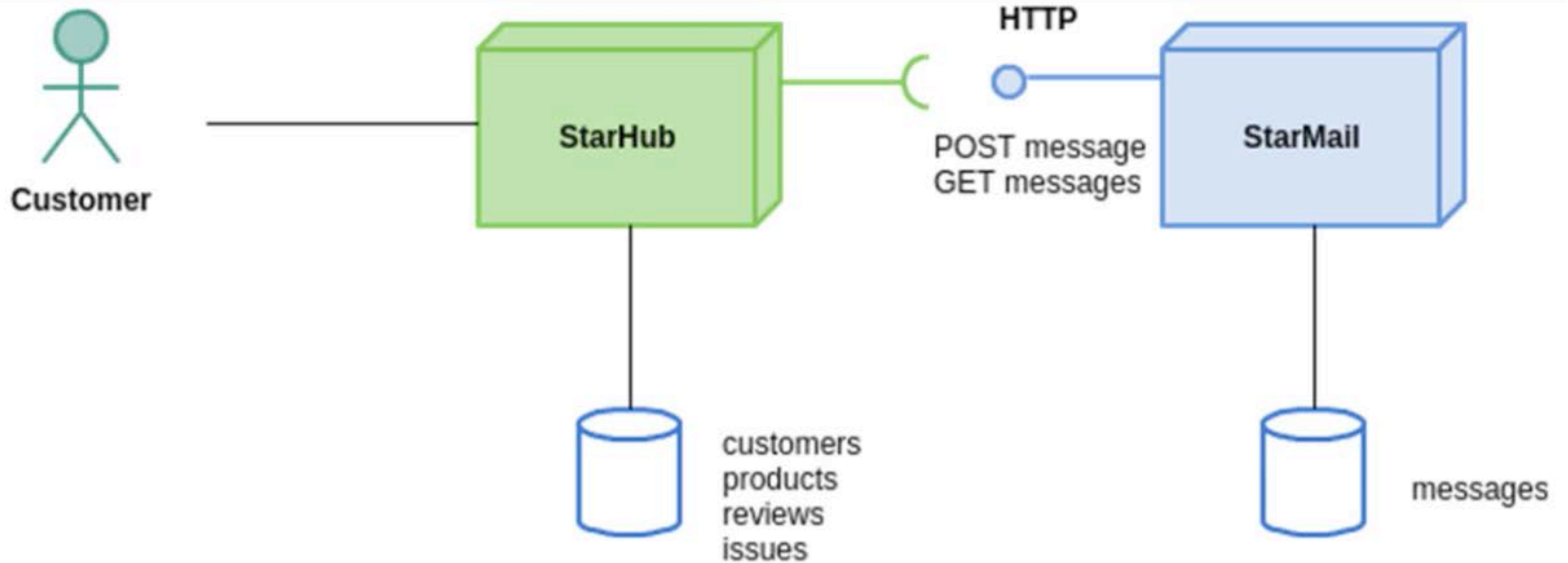


# Creating an API Project with Rails

In this Video, we are going to take a look at...

- Using the Rails API option to create an API-only project
- Plugging in a serializer
- Creating a message resource and managing its routes
- Testing our API

# System Architecture



fred at fred-HP-Desktop in ~/Work/packt-pub/expert\_rails\_5 using ruby-2.3.3@global  
o █

I

```
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5 using ruby-2.3.3@global
○ rvm gemset use starmail --create
Using ruby-2.3.3 with gemset starmail
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5 using ruby-2.3.3@starmail
○ gem
```

```
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5 using ruby-2.3.3@global
o rvm gemset use starmail --create
Using ruby-2.3.3 with gemset starmail
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5 using ruby-2.3.3@starmail
o gem install rails -v 5.0.1
```

```
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5 using ruby-2.3.3@starmail  
o rails new starmail --api --database=postgresql
```

I

```
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5 using ruby-2.3.3@starmail  
o rails new starmail --api --database=postgresql
```

I



```
Using arel 7.1.4
Using bundler 1.13.7
Using byebug 9.0.6
Using ffi 1.9.17
Using rb-fsevent 0.9.8
Using method_source 0.8.2
Using pg 0.19.0
Using puma 3.7.0
Using thor 0.19.4
Using tzinfo 1.2.2
Using nokogiri 1.7.0.1
Using rack-test 0.6.3
Using sprockets 3.7.1
Using websocket-driver 0.6.5
Using mime-types 3.1
Using rb-inotify 0.9.8
Using activesupport 5.0.1
Using loofah 2.0.3
Using mail 2.6.4
Using listen 3.0.8
Using rails-dom-testing 2.0.2
Using globalid 0.3.7
Using activemodel 5.0.1
Using spring 2.0.1
Using rails-html-sanitizer 1.0.3
Using activejob 5.0.1
Using activerecord 5.0.1
Using spring-watcher-listen 2.0.1
Using actionview 5.0.1
Using actionpack 5.0.1
Using actioncable 5.0.1
Using actionmailer 5.0.1
Using railties 5.0.1
Using sprockets-rails 3.2.0
Using rails 5.0.1
Bundle complete! 8 Gemfile dependencies, 47 gems now installed.
Use `bundle show [gemname]` to see where a bundled gem is installed.
    run bundle exec spring binstub --all
* bin/rake: spring inserted
* bin/rails: spring inserted
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5 using ruby-2.3.3@starmail
○
```

```
├── setup
├── spring
├── update
├── config
│   ├── application.rb
│   ├── boot.rb
│   ├── cable.yml
│   ├── database.yml
│   ├── environment.rb
│   ├── environments
│   ├── initializers
│   ├── locales
│   ├── puma.rb
│   ├── routes.rb
│   ├── secrets.yml
│   └── spring.rb
├── config.ru
├── db
│   └── seeds.rb
├── Gemfile
├── Gemfile.lock
├── lib
│   └── tasks
├── log
├── public
│   └── robots.txt
├── Rakefile
├── README.md
├── test
│   ├── controllers
│   ├── fixtures
│   ├── integration
│   ├── mailers
│   ├── models
│   └── test_helper.rb
├── tmp
│   └── cache
└── vendor
```

26 directories, 23 files

fred at fred-HP-Desktop in ~/Work/packt-pub/expert\_rails\_5/starmail using ruby-2.3.3@starmail

```
Using actionmailer 5.0.1
Using railties 5.0.1
Using sprockets-rails 3.2.0
Using rails 5.0.1
Bundle complete! 8 Gemfile dependencies, 47 gems now installed.
Use `bundle show [gemname]` to see where a bundled gem is installed.
  run bundle exec spring binstub --all
* bin/rake: spring inserted
* bin/rails: spring inserted
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5 using ruby-2.3.3@starmail
o cd starmail
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
o tree -L 2
```

```
.
├── app
│   ├── channels
│   ├── controllers
│   ├── jobs
│   ├── mailers
│   ├── models
│   └── views
├── bin
│   ├── bundle
│   ├── rails
│   ├── rake
│   ├── setup
│   ├── spring
│   └── update
├── config
│   ├── application.rb
│   ├── boot.rb
│   ├── cable.yml
│   ├── database.yml
│   ├── environment.rb
│   ├── environments
│   ├── initializers
│   ├── locales
│   ├── puma.rb
│   ├── routes.rb
│   ├── secrets.yml
│   ├── spring.rb
│   └── config.ru
```



## FOLDERS

- starmail
  - app
  - bin
  - config
  - db
  - lib
  - log
  - public
  - test
  - tmp
  - vendor
  - .gitignore
  - Gemfile
  - Gemfile.lock
  - README.md
  - Rakefile
  - config.ru

&lt; &gt;

1

## FOLDERS

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  - public
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  - tmp
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- .gitignore
- Gemfile
- Gemfile.lock
- README.md
- Rakefile
- config.ru

◀ ▶ Gemfile

```
1 source 'https://rubygems.org'
2
3- git_source(:github) do |repo_name|
4   repo_name = "#{repo_name}/#{repo_name}" unless repo_name.include?("/")
5   "https://github.com/#{repo_name}.git"
6 end
7
8
9 # Bundle edge Rails instead: gem 'rails', github: 'rails/rails'
10 gem 'rails', '~> 5.0.1'
11 # Use postgresql as the database for Active Record
12 gem 'pg', '~> 0.18'
13 # Use Puma as the app server
14 gem 'puma', '~> 3.0'
15 # Build JSON APIs with ease. Read more: https://github.com/rails/jbuilder
16 # gem 'jbuilder', '~> 2.5'
17 # Use Redis adapter to run Action Cable in production
18 # gem 'redis', '~> 3.0'
19 # Use ActiveSupport has_secure_password
20 # gem 'bcrypt', '~> 3.1.7'
21
22 # Use Capistrano for deployment
23 # gem 'capistrano-rails', group: :development
24
```



## FOLDERS

- starmail
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  - log
  - public
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  - tmp
  - vendor
- .gitignore
- Gemfile
- Gemfile.lock
- README.md
- Rakefile
- config.ru

◀ ▶ Gemfile

```
19 # Use ActiveRecord has_secure_password
20 # gem 'bcrypt', '~> 3.1.7'
21
22 # Use Capistrano for deployment
23 # gem 'capistrano-rails', group: :development
24
25 # Use Rack CORS for handling Cross-Origin Resource Sharing (CORS), making
    cross-origin AJAX possible
26 # gem 'rack-cors'
27
28- group :development, :test do
29     # Call 'byebug' anywhere in the code to stop execution and get a debugger
        console
30     gem 'byebug', platform: :mri
31 end
32
33- group :test do
34     gem 'minitest-rails'
35     gem 'minitest-reporters'
36 end
37
38 gem 'active_model_serializers', '~> 0.10.0'
39
40- group :development do
```

```
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
o subl -n .
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
o bundle
```

```
Using rb-fsevent 0.9.8
Using method_source 0.8.2
Using thor 0.19.4
Using ruby-progressbar 1.8.1
Using pg 0.19.0
Using puma 3.7.0
Using bundler 1.13.7
Using tzinfo 1.2.2
Using nokogiri 1.7.0.1
Using rack-test 0.6.3
Using sprockets 3.7.1
Using websocket-driver 0.6.5
Using mime-types 3.1
Using jsonapi 0.1.1.beta6
Using rb-inotify 0.9.8
Using minitest-reporters 1.1.13
Using activesupport 5.0.1
Using loofah 2.0.3
Using mail 2.6.4
Using listen 3.0.8
Using rails-dom-testing 2.0.2
Using globalid 0.3.7
Using activemodel 5.0.1
Using case_transform 0.2
Using spring 2.0.1
Using rails-html-sanitizer 1.0.3
Using activejob 5.0.1
Using activerecord 5.0.1
Using spring-watcher-listen 2.0.1
Using actionview 5.0.1
Using actionpack 5.0.1
Using actioncable 5.0.1
Using actionmailer 5.0.1
Using active_model_serializers 0.10.4
Using railties 5.0.1
Using sprockets-rails 3.2.0
Using minitest-rails 3.0.0
Using rails 5.0.1
```

Bundle complete! 11 Gemfile dependencies, 56 gems now installed.

Use `bundle show [gemname]` to see where a bundled gem is installed.

fred at fred-HP-Desktop in ~/Work/packt-pub/expert\_rails\_5/starmail using ruby-2.3.3@starmail

o █



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    - application.rb
    - boot.rb
    - cable.yml
    - database.yml
    - environment.rb
    - puma.rb
    - routes.rb
    - secrets.yml
    - spring.rb
  - db
  - lib
  - log
  - public
  - test
  - tmp
  - vendor
    - .gitignore
    - Gemfile
    - Gemfile.lock
    - README.md
    - Rakefile
    - config.ru

◀ ▶ Gemfile

database.yml

```
1 # PostgreSQL. Versions 9.1 and up are supported.
2 #
3 # Install the pg driver:
4 #   gem install pg
5 # On OS X with Homebrew:
6 #   gem install pg -- --with-pg-config=/usr/local/bin/pg_config
7 # On OS X with MacPorts:
8 #   gem install pg -- --with-pg-config=/opt/local/lib/postgresql84/bin/
   pg_config
9 # On Windows:
10 #   gem install pg
11 #       Choose the win32 build.
12 #       Install PostgreSQL and put its /bin directory on your path.
13 #
14 # Configure Using Gemfile
15 # gem 'pg'
16 #
17- default: &default
18   adapter: postgresql
19   encoding: unicode
20   # For details on connection pooling, see rails configuration guide
21   # http://guides.rubyonrails.org/configuring.html#database-pooling
22   pool: <%= ENV.fetch("RAILS_MAX_THREADS") { 5 } %>
23
```



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```
12 #      Install PostgreSQL and put its /bin directory on your path.
13 #
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15 # gem 'pg'
16 #
17- default: &default
18   adapter: postgresql
19   encoding: unicode
20   # For details on connection pooling, see rails configuration guide
21   # http://guides.rubyonrails.org/configuring.html#database-pooling
22   pool: <%= ENV.fetch("RAILS_MAX_THREADS") { 5 } %>
23   username: pgrails
24   password: password
25
26- development:
27   <<: *default
28   database: starmail_development
29
30   # The specified database role being used to connect to postgres.
31   # To create additional roles in postgres see `$ createuser --help`.
32   # When left blank, postgres will use the default role. This is
33   # the same name as the operating system user that initialized the d
34   #username: starmail
35
```



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    - spring.rb
  - db
  - lib
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12 #      Install PostgreSQL and put its /bin directory on your path.
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22   pool: <%= ENV.fetch("RAILS_MAX_THREADS") { 5 } %>
23   username: pgrails
24   password: password
25
26- development:
27   <<: *default
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29
30   # The specified database role being used to connect to postgres.
31   # To create additional roles in postgres see `$ createuser --help`.
32   # When left blank, postgres will use the default role. This is
33   # the same name as the operating system user that initialized the d
34   #username: starmail
35
```

```
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
○ rails db:setup
Created database 'starmail_development'
Created database 'starmail_test'
/home/fred/Work/packt-pub/expert_rails_5/starmail/db/schema.rb doesn't exist yet. Run `rails db:migrate` to create it, then try again. If you do not intend to
use a database, you should instead alter /home/fred/Work/packt-pub/expert_rails_5/starmail/config/application.rb to limit the frameworks that will be loaded.
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
○ █
```



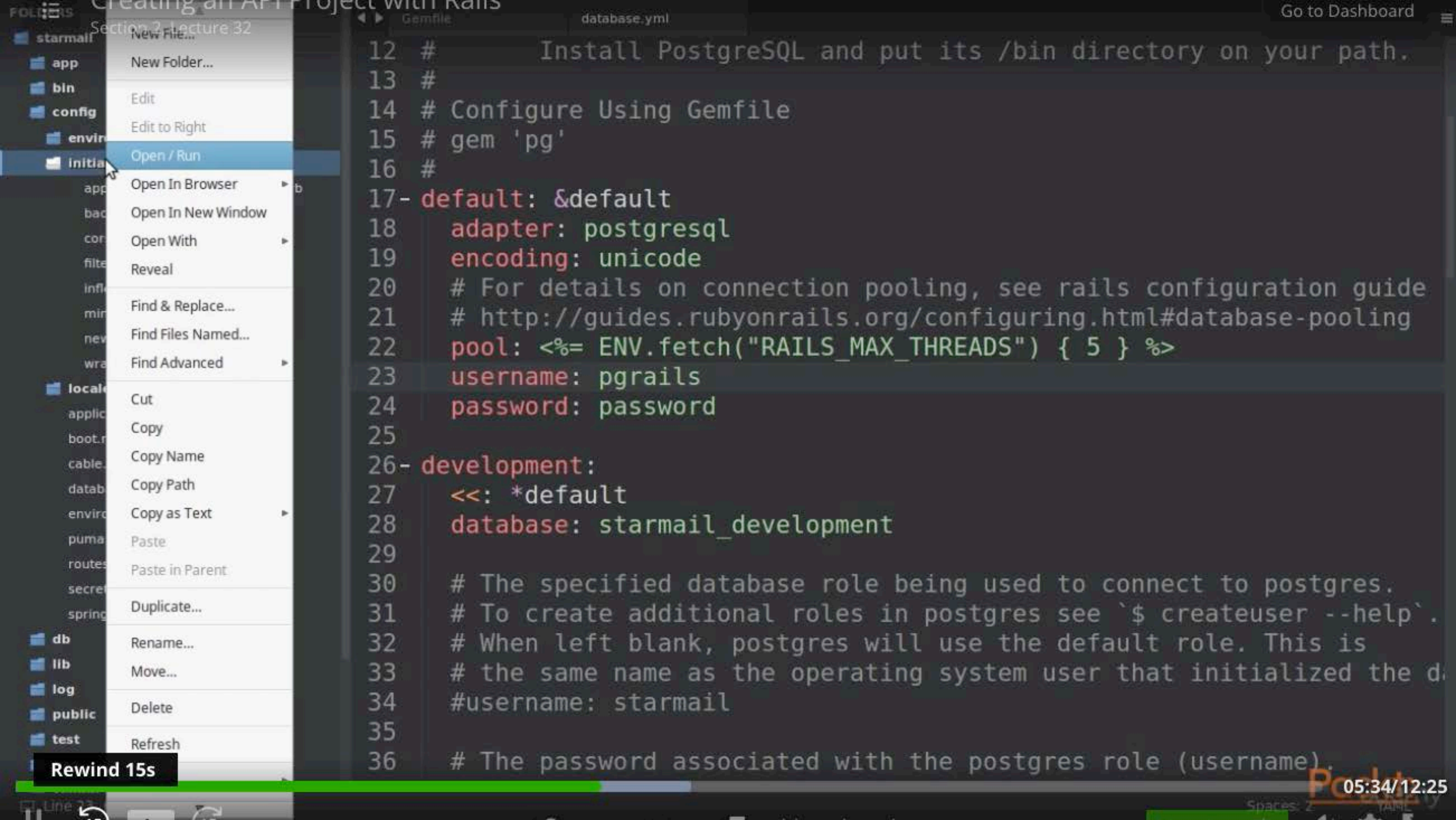
```
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
○ rails db:setup
Created database 'starmail_development'
Created database 'starmail_test'
/home/fred/Work/packt-pub/expert_rails_5/starmail/db/schema.rb doesn't exist yet. Run `rails db:migrate` to create it, then try again. If you do not intend to
use a database, you should instead alter /home/fred/Work/packt-pub/expert_rails_5/starmail/config/application.rb to limit the frameworks that will be loaded.
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
○ rails g scaffold Message originator:string content:string recipient:string status:integer
Running via Spring preloader in process 13123
Expected string default value for '--serializer'; got true (boolean)
  invoke active_record
  create db/migrate/20170219220433_create_messages.rb
  create app/models/message.rb
  invoke test_unit
  create test/models/message_test.rb
  create test/fixtures/messages.yml
  invoke resource_route
  route resources :messages
  invoke serializer
  create app/serializers/message_serializer.rb
  invoke scaffold_controller
  create app/controllers/messages_controller.rb
  invoke test_unit
  create test/controllers/messages_controller_test.rb
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
○ █
```

```
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
○ rails db:setup
Created database 'starmail_development'
Created database 'starmail_test'
/home/fred/Work/packt-pub/expert_rails_5/starmail/db/schema.rb doesn't exist yet. Run `rails db:migrate` to create it, then try again. If you do not intend to
use a database, you should instead alter /home/fred/Work/packt-pub/expert_rails_5/starmail/config/application.rb to limit the frameworks that will be loaded.
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
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Running via Spring preloader in process 13123
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  create app/models/message.rb
  invoke test_unit
  create test/models/message_test.rb
  create test/fixtures/messages.yml
  invoke resource_route
  route resources :messages
  invoke serializer
  create app/serializers/message_serializer.rb
  invoke scaffold_controller
  create app/controllers/messages_controller.rb
  invoke test_unit
  create test/controllers/messages_controller_test.rb
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
○ █
```

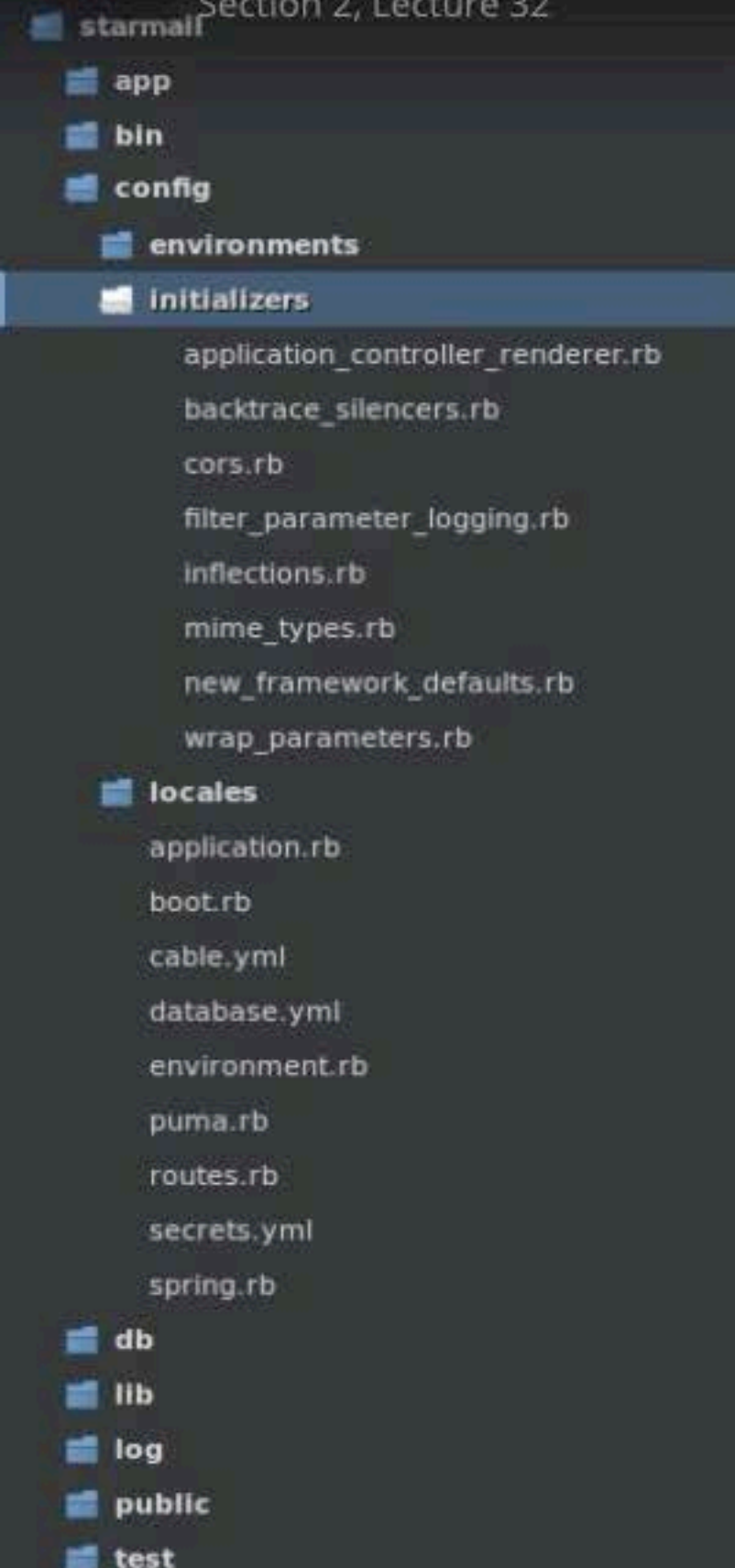


```
◀ ▶ Gemfile database.yml
12 #       Install PostgreSQL and put its /bin directory on your path.
13 #
14 # Configure Using Gemfile
15 # gem 'pg'
16 #
17- default: &default
18   adapter: postgresql
19   encoding: unicode
20   # For details on connection pooling, see rails configuration guide
21   # http://guides.rubyonrails.org/configuring.html#database-pooling
22   pool: <%= ENV.fetch("RAILS_MAX_THREADS") { 5 } %>
23   username: pgrails
24   password: password
25
26- development:
27   <<: *default
28   database: starmail_development
29
30   # The specified database role being used to connect to postgres.
31   # To create additional roles in postgres see `$ createuser --help`.
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35
```









```
12 # Install PostgreSQL and put its /bin directory on your path.
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22   pool: <%= ENV.fetch("RAILS_MAX_THREADS") { 5 } %>
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25
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```
◀ ▶ Gemfile database.yml
12 #       Install PostgreSQL and put its /bin directory on your path.
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32   # When left blank, postgres will use the default role. This is
33   # the same name as the operating system user that initialized the d
34   #username: starmail
35
```

```
1 ActiveSupportSerializers.config.adapter = :attributes
```

I



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    - controllers
    - jobs
    - mailers
    - models
    - serializers
      - message\_serializer.rb
  - views
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  - config
    - environments
    - initializers
      - active\_model\_serializers.rb
      - application\_controller\_renderer.rb
      - backtrace\_silencers.rb
      - cors.rb
      - filter\_parameter\_logging.rb
      - inflections.rb
      - mime\_types.rb
      - new\_framework\_defaults.rb
      - wrap\_parameters.rb
  - locales
    - application.rb
    - boot.rb
    - cable.yml
    - database.yml
    - environment.rb
    - puma.rb
    - routes.rb

```
Gemfile  database.yml  active_model_serializers.rb  message_serializer.rb
1 |class MessageSerializer < ActiveModel::Serializer
2 |  attributes :id, :originator, :content, :recipient, :status
3 |end
4
```

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    - locales
      - application.rb
      - boot.rb
      - cache.yml
      - database.yml
      - environment.rb
      - puma.rb
      - routes.rb
- 58 characters selected

Gemfile database.yml active\_model\_serializers.rb message\_serializer.rb

```
1 class MessageSerializer < ActiveModel::Serializer
2   attributes :id, :originator, :content, :recipient, :status
3 end
4
```



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rails-api / **active\_model\_serializers**

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113

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4,028

🍴 Fork

1,100

<> Code

🔔 Issues 119

🔗 Pull requests 31

📁 Projects 1

📖 Wiki

🚦 Pulse

📊 Graphs

ActiveModel::Serializer implementation and Rails hooks

ruby

json

resource-serializer

📶 1,389 commits

🌿 8 branches

📦 28 releases

👥 167 contributors

📄 MIT

Branch: master ▾

New pull request

Find file

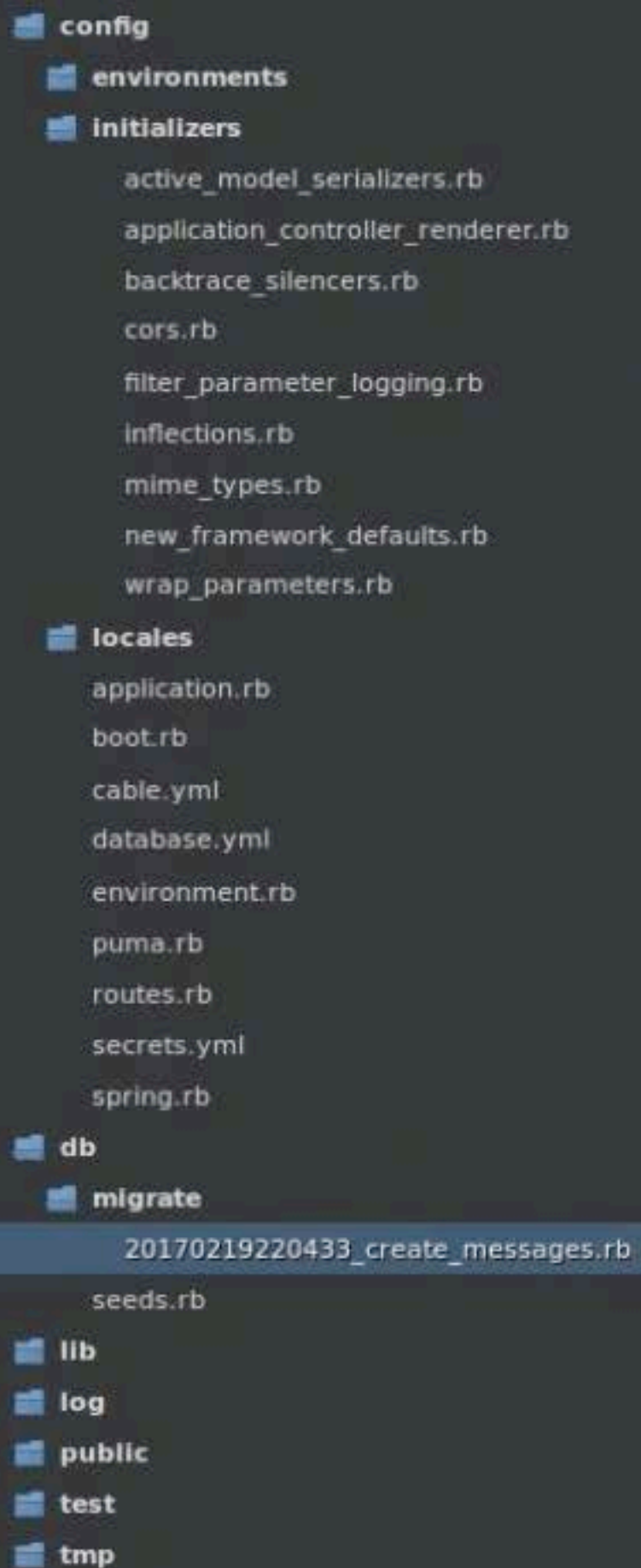
Clone or download ▾

🌟 bf4 committed on GitHub Merge pull request #2055 from jaredbeck/patch-2 ...

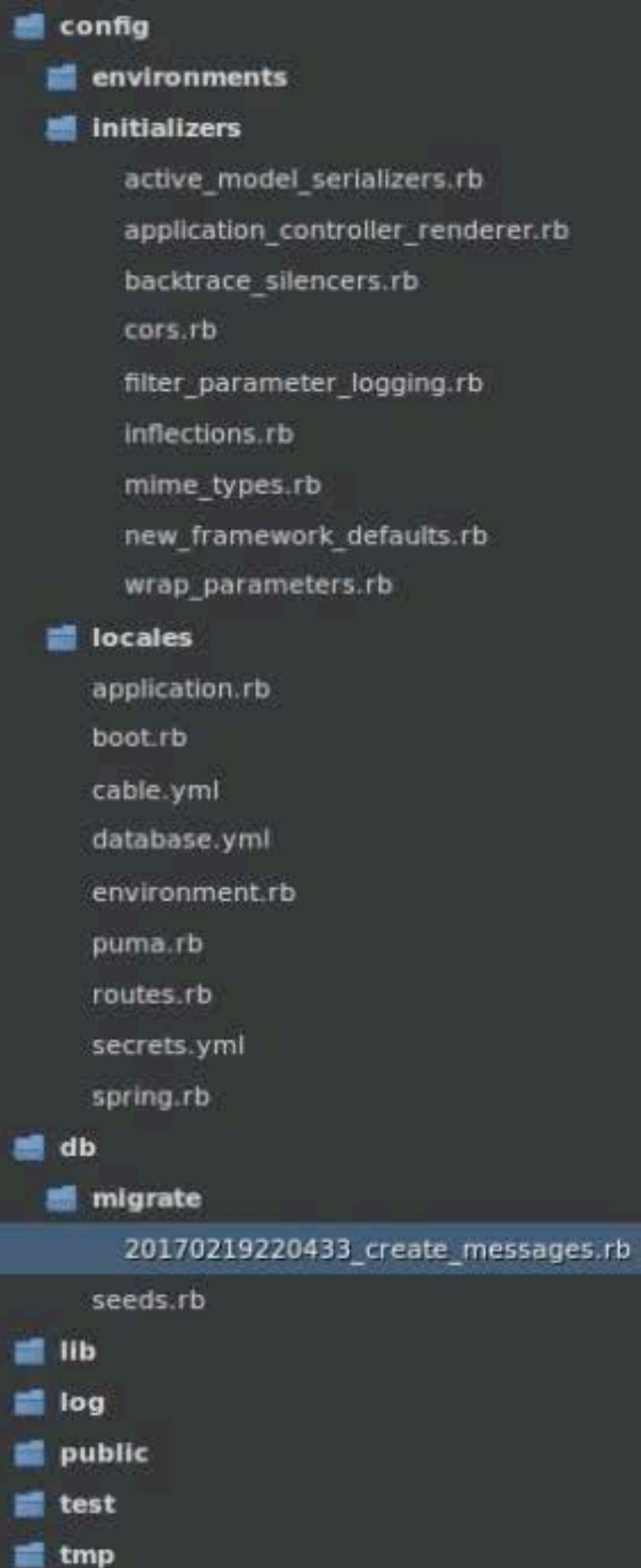
Latest commit 00fc1fe 17 hours ago

📁 .github	Fix GitHub template formatting and spelling	a year ago
📁 bin	Merge pull request #1588 from bf4/benchmark_revision_runner	11 months ago
📁 docs	Update outside_controller_use.md (#2047)	12 days ago
📁 lib	Merge pull request #2046 from leonelgalan/bug_filter_parameters	4 days ago
📁 test	Merge pull request #2046 from leonelgalan/bug_filter_parameters	4 days ago
📄 .gitignore	adds mac files to .gitignore (#1728)	9 months ago
📄 .rubocop.yml	re: RuboCop - replace rocket style hashes	8 months ago
📄 .simplecov	Update SimpleCov; remove compatibility patch	a year ago
📄 .travis.yml	Fix JRuby build on CI, with a suggestion from Travis CI support (#2040)	25 days ago





```
active_model_serializers.rb 20170219220433_create_messages.rb
1- class CreateMessages < ActiveRecord::Migration[5.0]
2-   def change
3-     create_table :messages do |t|
4-       t.string :originator
5-       t.string :content
6-       t.string :recipient
7-       t.integer :status
8-
9-       t.timestamps
10-     end
11-   end
12- end
13
```



```
active_model_serializers.rb 20170219220433_create_messages.rb
1- class CreateMessages < ActiveRecord::Migration[5.0]
2-   def change
3-     create_table :messages do |t|
4-       t.string :originator
5-       t.string :content
6-       t.string :recipient
7-       t.integer :status, default: 1
8-
9-       t.timestamps
10-     end
11-   end
12- end
13
```



fred at fred-HP-Desktop in ~/Work/packt-pub/expert\_rails\_5/starmail using ruby-2.3.0 (armv7l)

o rails db:migrate

== 20170219220433 CreateMessages: migrating =====

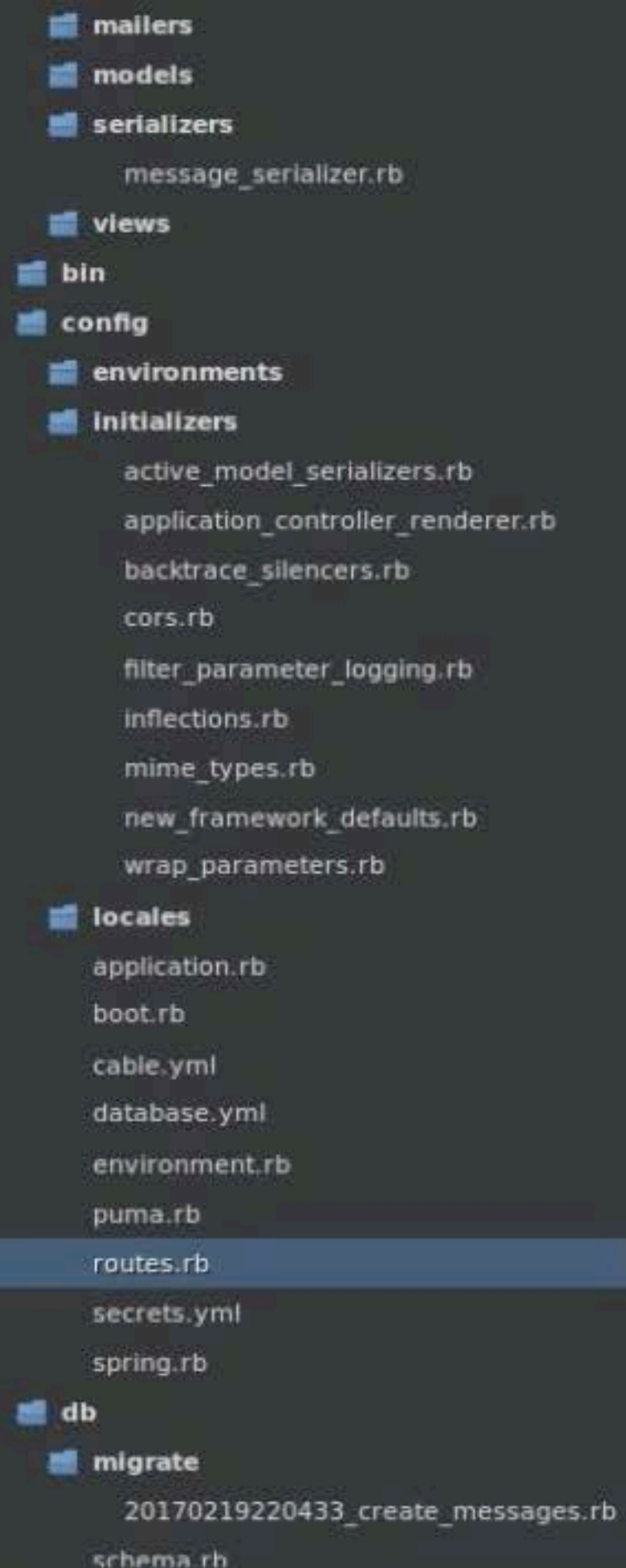
-- create\_table(:messages)

-> 0.0857s

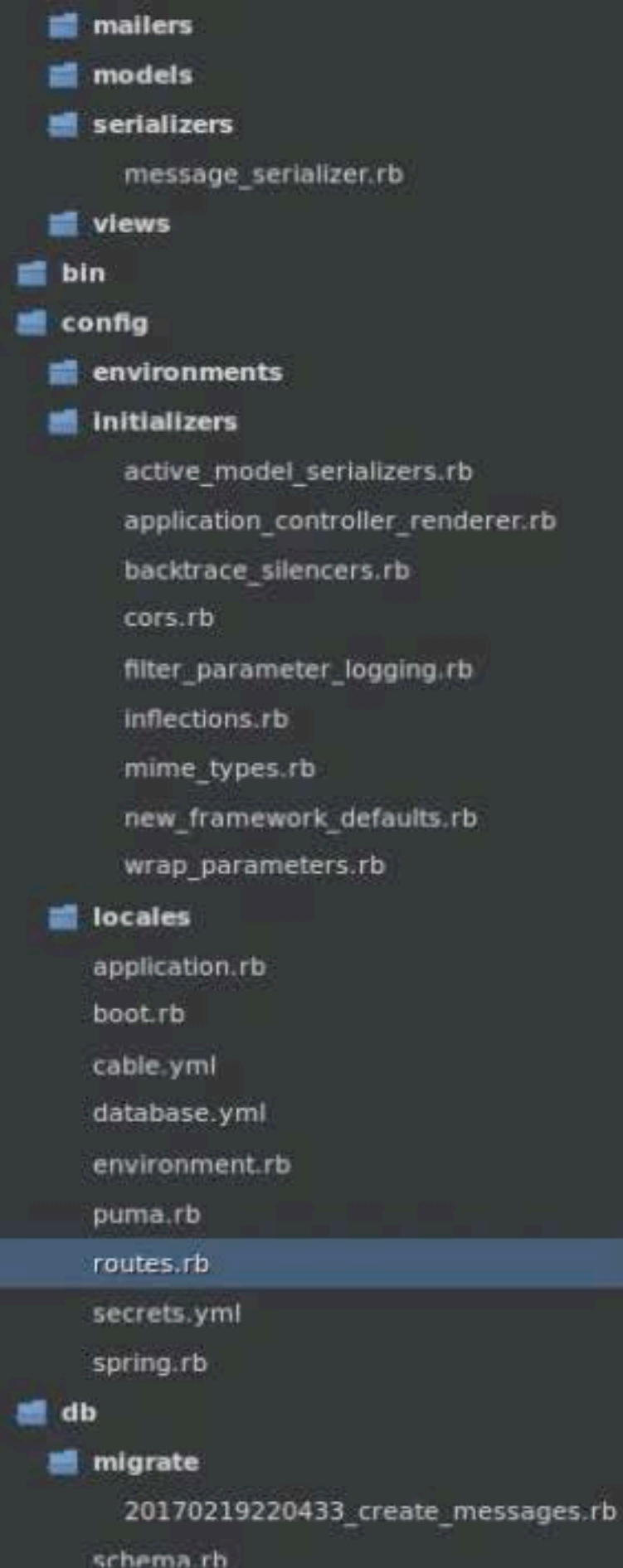
== 20170219220433 CreateMessages: migrated (0.0858s) =====

fred at fred-HP-Desktop in ~/Work/packt-pub/expert\_rails\_5/starmail using ruby-2.3.0 (armv7l)

o



```
active_model_serializers.rb 20170219220433_create_messages.rb routes.rb
1- Rails.application.routes.draw do
2   resources :messages
3   # For details on the DSL available within this file, see http://
   guides.rubyonrails.org/routing.html
4 end
5
```



```
active_model_serializers.rb 20170219220433_create_messages.rb routes.rb
1- Rails.application.routes.draw do
2   resources :messages , except: [:update, :show]
3   # For details on the DSL available within this file, see http://
   guides.rubyonrails.org/routing.html
4 end
5
```



## FOLDERS

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      - application.rb
      - boot.rb
      - cable.yml
      - database.yml
      - environment.rb
      - puma.rb
      - routes.rb
      - secrets.yml
      - spring.rb
  - db
  - lib
  - log

```
routes.rb  messages_controller.rb
4  # GET /messages
5-  def index
6    @messages = Message.all
7
8    render json: @messages
9  end
10
11  # GET /messages/1
12  def show
13    render json: @message
14  end
15
16  # POST /messages
17-  def create
18    @message = Message.new(message_params)
19
20    if @message.save
21      render json: @message, status: :created, location: @message
22    else
23      render json: @message.errors, status: :unprocessable_entity
24    end
25  end
26
27  # PATCH/PUT /messages/1
```

## FOLDERS

- starmail
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        - messages\_controller.rb
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      - application.rb
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      - environment.rb
      - puma.rb
      - routes.rb
      - secrets.yml
      - spring.rb
  - db
  - lib
  - log

```
routes.rb  messages_controller.rb
13  # POST /messages
14-  def create
15    @message = Message.new(message_params)
16
17    if @message.save
18      render json: @message, status: :created, location: @message
19    else
20      render json: @message.errors, status: :unprocessable_entity
21    end
22  end
23
24  # PATCH/PUT /messages/1
25-  def update
26    if @message.update(message_params)
27      render json: @message
28    else
29      render json: @message.errors, status: :unprocessable_entity
30    end
31  end
32
33  # DELETE /messages/1
34  def destroy
35    @message.destroy
36  end
```



## FOLDERS

## starmail

## app

## channels

## controllers

## concerns

application\_controller.rb

messages\_controller.rb

## jobs

## mailers

## models

## serializers

## views

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boot.rb

cable.yml

database.yml

environment.rb

puma.rb

routes.rb

secrets.yml

spring.rb

## db

## lib

## log

routes.rb

messages\_controller.rb

```
16
17   if @message.save
18     render json: @message, status: :created, location: @message
19   else
20     render json: @message.errors, status: :unprocessable_entity
21   end
22 end
23
24 # PATCH/PUT /messages/1
25- def update
26   if @message.update(message_params)
27     render json: @message
28   else
29     render json: @message.errors, status: :unprocessable_entity
30   end
31 end
32
33 # DELETE /messages/1
34 def destroy
35   @message.destroy
36 end
37
38- private
39   # Use callbacks to share common setup or constraints between actions
```



## FOLDERS

## starmail

## app

## channels

## controllers

## concerns

application\_controller.rb

messages\_controller.rb

## jobs

## mailers

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## serializers

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application.rb

boot.rb

cable.yml

database.yml

environment.rb

puma.rb

routes.rb

secrets.yml

spring.rb

## db

## lib

## log

routes.rb

messages\_controller.rb

```
16
17   if @message.save
18     render json: @message, status: :created, location: @message
19   else
20     render json: @message.errors, status: :unprocessable_entity
21   end
22 end
23
24
25 # DELETE /messages/1
26 def destroy
27   @message.destroy
28 end
29
30 private
31 # Use callbacks to share common setup or constraints between actions
32 def set_message
33   @message = Message.find(params[:id])
34 end
35
36 # Only allow a trusted parameter "white list" through.
37 def message_params
38   params.require(:message).permit(:originator, :content, :recipient,
```



- environments
- initializers
- locales
  - application.rb
  - boot.rb
  - cable.yml
  - database.yml
  - environment.rb
  - puma.rb
  - routes.rb
  - secrets.yml
  - spring.rb
- db
- lib
- log
- public
- test
  - controllers
    - .keep
    - messages\_controller\_test.rb
  - fixtures
  - integration
  - mailers
  - models
    - test\_helper.rb
- tmp
- vendor
  - .gitignore
  - Gemfile
  - Gemfile.lock
  - README.md

```
1 |require 'test_helper'
2
3- class MessagesControllerTest < ActionDispatch::IntegrationTest
4   setup do
5     @message = messages(:one)
6   end
7
8-   test "should get index" do
9     get messages_url, as: :json
10    assert_response :success
11  end
12
13-   test "should create message" do
14     assert_difference('Message.count') do
15       I post messages_url, params: { message: { content: @message.content,
16         originator: @message.originator, recipient: @message.recipient,
17         @message.status } }, as: :json
18     end
19
20     assert_response 201
21   end
22
23-   test "should show message" do
24     get message_url(@message), as: :json
```



environments  
initializers  
locales  
application.rb  
boot.rb  
cable.yml  
database.yml  
environment.rb  
puma.rb  
routes.rb  
secrets.yml  
spring.rb  
db  
lib  
log  
public  
test  
controllers  
keep  
messages\_controller\_test.rb  
fixtures  
integration  
mailers  
models  
test\_helper.rb  
tmp  
vendor  
.gitignore  
Gemfile  
Gemfile.lock  
README.md

```
routes.rb  messages_controller.rb  messages_controller_test.rb

13- test "should create message" do
14   assert_difference('Message.count') do
15     post messages_url, params: { message: { content: @message.content,
16       originator: @message.originator, recipient: @message.recipient,
17       @message.status } }, as: :json
18   end
19   assert_response 201
20 end
21- test "should show message" do
22   get message_url(@message), as: :json
23   assert_response :success
24 end
25
26- test "should update message" do
27   patch message_url(@message), params: { message: { content: @message.content,
28     originator: @message.originator, recipient: @message.recipient,
29     @message.status } }, as: :json
30   assert_response 200
31 end
32
33- test "should destroy message" do
34   delete message_url(@message), as: :json
35   assert_difference('Message.count', -1) do
36     delete message_url(@message), as: :json
37   end
38 end
```



## Environments

## initializers

## locales

application.rb  
boot.rb  
cable.yml  
database.yml  
environment.rb  
puma.rb  
routes.rb  
secrets.yml  
spring.rb

## db

## lib

## log

## public

## test

## controllers

.keep

messages\_controller\_test.rb

## fixtures

## integration

## mailers

## models

test\_helper.rb

## tmp

## vendor

.gitignore

Gemfile

Gemfile.lock

README.md

routes.rb

messages\_controller.rb

messages\_controller\_test.rb

```
13- test "should create message" do
14-   assert_difference('Message.count') do
15-     post messages_url, params: { message: { content: @message.conte
16-       originator: @message.originator, recipient: @message.recipien
17-       @message.status } }, as: :json
18-   end
19-   assert_response 201
20- end
21- test "should destroy message" do
22-   assert_difference('Message.count', -1) do
23-     delete message_url(@message), as: :json
24-   end
25-   assert_response 204
26- end
27- end
28- end
29
```

## FOLDERS

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        - messages\_controller.rb
    - jobs
    - mailers
    - models
      - concerns
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    - serializers
      - message\_serializer.rb
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    - initializers
      - active\_model\_serializers.rb
      - application\_controller\_renderer.rb
      - backtrace\_silencers.rb
      - cors.rb
      - filter\_parameter\_logging.rb
      - inflections.rb
      - mime\_types.rb
      - new\_framework\_defaults.rb
      - wrap\_parameters.rb
  - locales

active\_model\_serializers.rb 20170219220433\_create\_messages.rb routes.rb messages\_controller.rb messages\_controller\_test.rb message.rb

```
1 |class Message < ApplicationRecord
2 |end
3
```

I



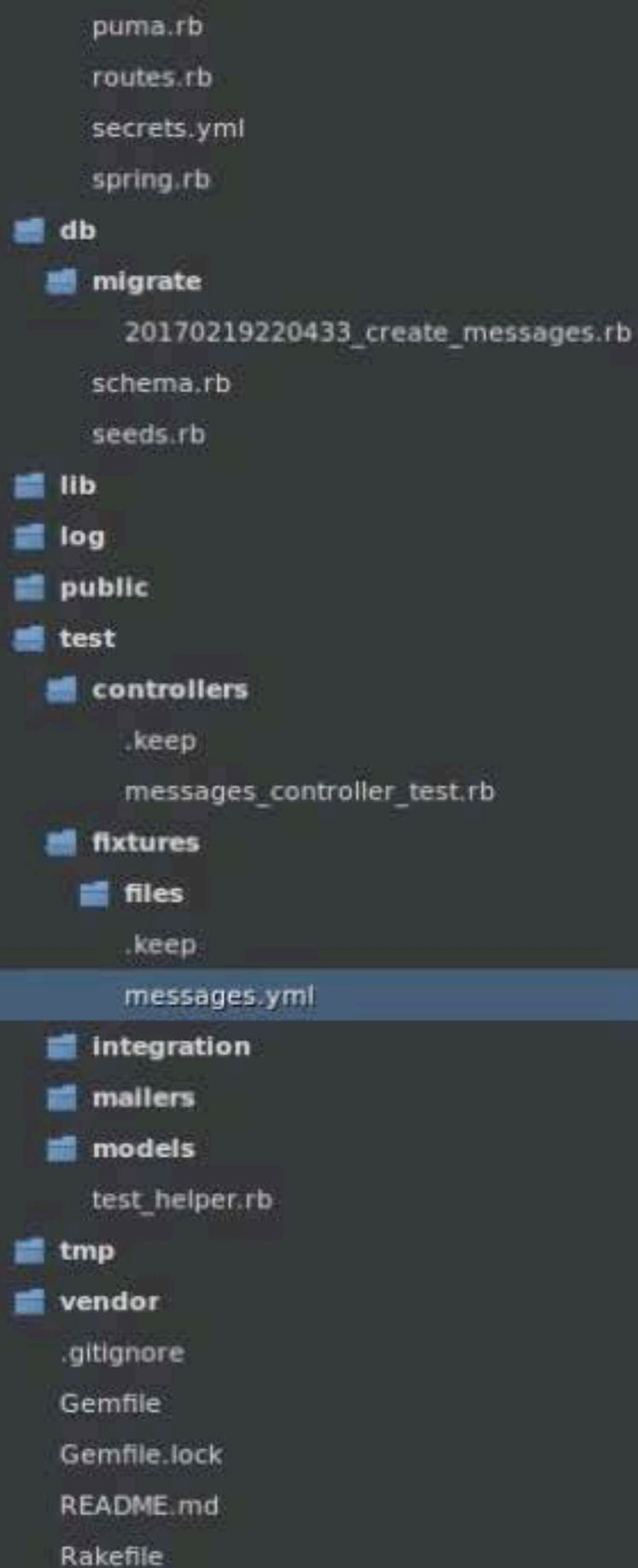
## FOLDERS

- starmail
  - app
    - channels
    - controllers
      - concerns
        - application\_controller.rb
        - messages\_controller.rb
    - jobs
    - mailers
    - models
      - concerns
        - application\_record.rb
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    - serializers
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    - views
  - bin
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    - cors.rb
    - filter\_parameter\_logging.rb
    - inflections.rb
    - mime\_types.rb
    - new\_framework\_defaults.rb
    - wrap\_parameters.rb
  - locales

active\_model\_serializers.rb 20170219220433\_create\_messages.rb routes.rb messages\_controller.rb messages\_controller\_test.rb message.rb

```
1- class Message < ApplicationRecord
2   validates :originator, presence: true
3   validates :recipient, presence: true
4   validates :content, length: { maximum: 256 }
5 end
6
```

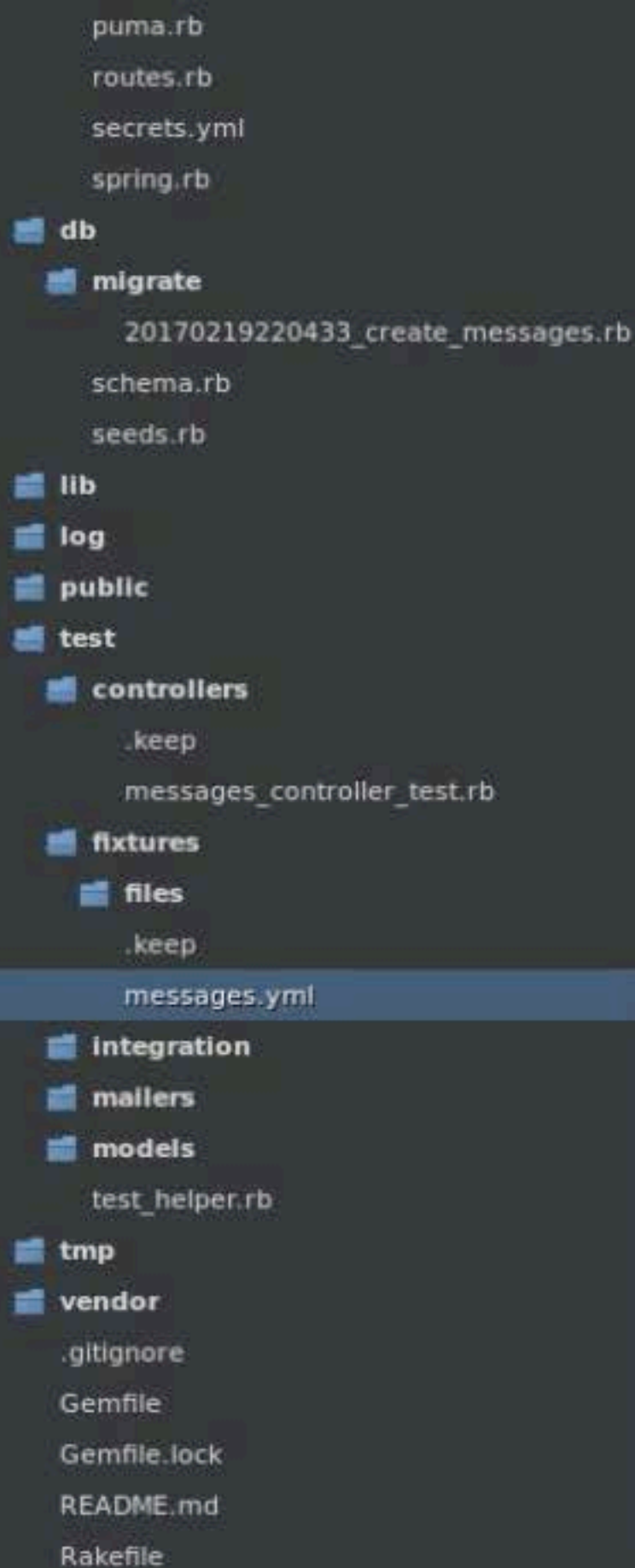
I



active\_m 20170219220433\_create\_messages.rb routes.rb messages\_controller.rb messages\_controller\_test.rb message.rb messages.yml

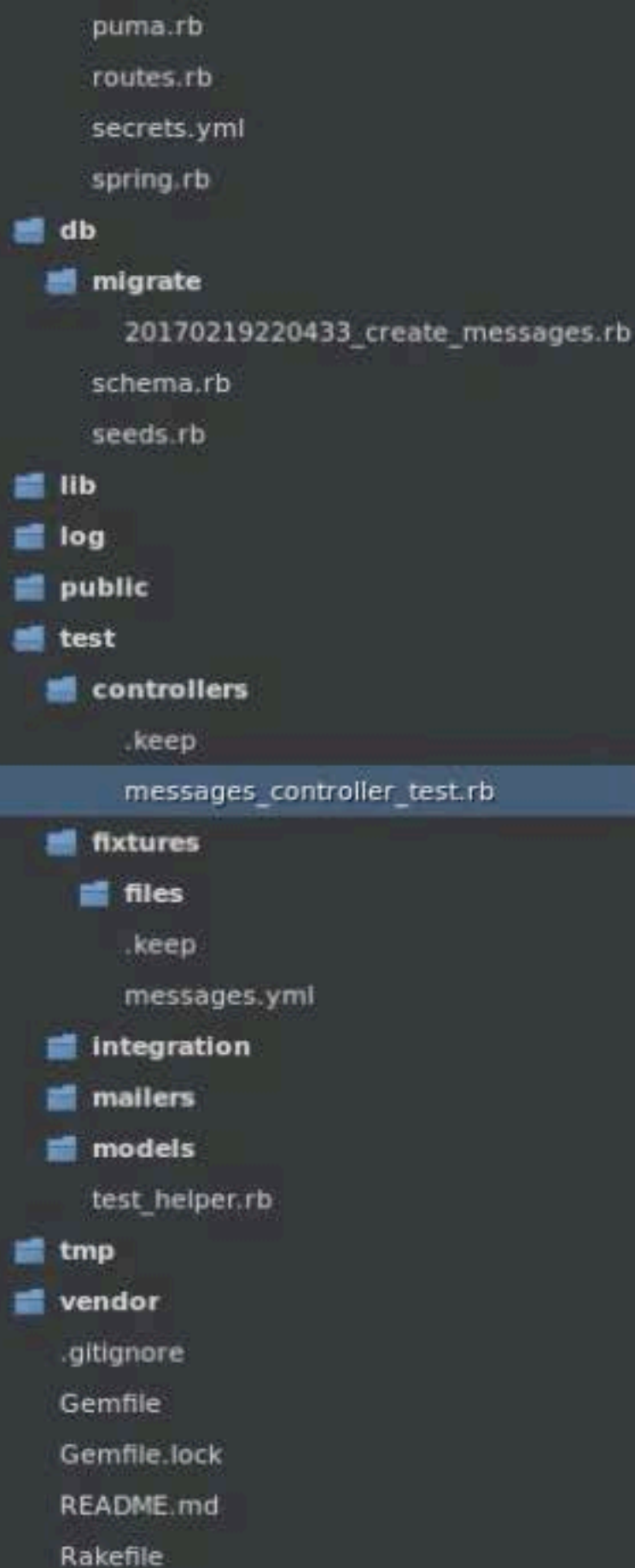
```
1 # Read about fixtures at http://api.rubyonrails.org/classes/ActiveRecord/
  FixtureSet.html
2
3- one:
4   originator: MyString
5   content: MyString
6   recipient: MyString
7   status: 1
8
9- two:
10  originator: MyString
11  content: MyString
12  recipient: MyString
13  status: 1
14
```





```
active_m 20170219220433_create_messages.rb routes.rb messages_controller.rb message.rb messages.yml messages_controller_test.rb
10      recipient: Jill
11      status: 1
12
13- three:
14      originator: Bob
15      content: me again
16      recipient: Alice
17      status: 2
18
19- four:
20      originator: Bob
21      content: it's hammer time!
22      recipient: Jill
23      status: 1
24
25- five:
26      originator: Timothy
27      content: meeting today
28      recipient: Alice
29      status: 3
30
31- six:
32      originator: Jack
33      content: accounts for last year
34      recipient: Mary
35      status: 2
```





```
active_m  20170219220433_create_messages.rb  routes.rb  messages_controller.rb  message.rb  messages.yml  messages_controller_test.rb
7
8- test "should get index" do
9   get messages_url, as: :json
10  assert_response :success
11 end
12
13- test "should create message" do
14   assert_difference('Message.count') do
15     post messages_url, params: { message: { content: @message.content,
16                                           originator: @message.originator, recipient: @message.recipient,
17                                           @message.status } }, as: :json
18   }
19   assert_response 201
20 end
21- test "should destroy message" do
22   assert_difference('Message.count', -1) do
23     delete message_url(@message), as: :json
24   }
25   assert_response 204
26 end
27 end
28
29
```



fred at fred-HP-Desktop in ~/Work/packt-pub/expert\_rails\_5/starmail using ruby-2.3.0-starmail

o rails test

Running via Spring preloader in process 24702

Run options: --seed 33634

# Running:

Finished in 0.286505s, 10.4710 runs/s, 17.4517 assertions/s.

3 runs, 5 assertions, 0 failures, 0 errors, 0 skips

fred at fred-HP-Desktop in ~/Work/packt-pub/expert\_rails\_5/starmail using ruby-2.3.0-starmail

o



active\_model\_serializers.rb  
application\_controller\_renderer.rb  
backtrace\_silencers.rb  
cors.rb  
filter\_parameter\_logging.rb  
inflections.rb  
mime\_types.rb  
new\_framework\_defaults.rb  
wrap\_parameters.rb

#### locales

application.rb  
boot.rb  
cable.yml  
database.yml  
environment.rb  
puma.rb  
routes.rb  
secrets.yml  
spring.rb

#### db

##### migrate

20170219220433\_create\_messages.rb  
schema.rb  
seeds.rb

#### lib

#### log

#### public

#### test

##### controllers

.keep  
messages\_controller\_test.rb

```
active_model_serializers.rb routes.rb messages_controller.rb seeds.rb
1 | # This file should contain all the record creation needed to seed the
  | with its default values.
2 | # The data can then be loaded with the rails db:seed command (or crea
  | alongside the database with db:setup).
3 | #
4 | # Examples:
5 | #
6 | #   movies = Movie.create([ { name: 'Star Wars' }, { name: 'Lord of the
  |   } ])
7 | #   Character.create(name: 'Luke', movie: movies.first)
8 |
```

I

active\_model\_serializers.rb  
application\_controller\_renderer.rb  
backtrace\_silencers.rb  
cors.rb  
filter\_parameter\_logging.rb  
inflections.rb  
mime\_types.rb  
new\_framework\_defaults.rb  
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#### locales

application.rb  
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#### db

##### migrate

20170219220433\_create\_messages.rb  
schema.rb  
seeds.rb

#### lib

#### log

#### public

#### test

##### controllers

.keep  
messages\_controller\_test.rb

```
active_model_serializers.rb routes.rb messages_controller.rb seeds.rb
1 Message.create originator: 'thomas', content: 'this is my message', r
  'fred'
2 Message.create originator: 'sarah', content: 'hello, how are you?', r
  'paul'
```

I



fred at fred-HP-Desktop in ~/Work/packt-pub/expert\_rails\_5/starmail using ruby-2.3, hostarmail

o rails db:seed

fred at fred-HP-Desktop in ~/Work/packt-pub/expert\_rails\_5/starmail using ruby-2.3, hostarmail

o

```

  1  def self.seed
  2    create_table :users do |t|
  3      t.string :name
  4      t.string :email
  5      t.string :password
  6      t.timestamps
  7    end
  8  end
  9 end
10
11 def seed
12   User.create(name: "John", email: "john@example.com", password: "password")
13   User.create(name: "Jane", email: "jane@example.com", password: "password")
14 end
15
16 if __FILE__ == $0
17   seed
18 end
```

```

19
20 def seed
21   User.create(name: "John", email: "john@example.com", password: "password")
22   User.create(name: "Jane", email: "jane@example.com", password: "password")
23 end
24
25 if __FILE__ == $0
26   seed
27 end
```

```

28
29 def seed
30   User.create(name: "John", email: "john@example.com", password: "password")
31   User.create(name: "Jane", email: "jane@example.com", password: "password")
32 end
33
34 if __FILE__ == $0
35   seed
36 end
```

```

37
38 def seed
39   User.create(name: "John", email: "john@example.com", password: "password")
40   User.create(name: "Jane", email: "jane@example.com", password: "password")
41 end
42
43 if __FILE__ == $0
44   seed
45 end
```

```

46
47 def seed
48   User.create(name: "John", email: "john@example.com", password: "password")
49   User.create(name: "Jane", email: "jane@example.com", password: "password")
50 end
51
52 if __FILE__ == $0
53   seed
54 end
```

```

55
56 def seed
57   User.create(name: "John", email: "john@example.com", password: "password")
58   User.create(name: "Jane", email: "jane@example.com", password: "password")
59 end
60
61 if __FILE__ == $0
62   seed
63 end
```

```

64
65 def seed
66   User.create(name: "John", email: "john@example.com", password: "password")
67   User.create(name: "Jane", email: "jane@example.com", password: "password")
68 end
69
70 if __FILE__ == $0
71   seed
72 end
```

```

73
74 def seed
75   User.create(name: "John", email: "john@example.com", password: "password")
76   User.create(name: "Jane", email: "jane@example.com", password: "password")
77 end
78
79 if __FILE__ == $0
80   seed
81 end
```

```

82
83 def seed
84   User.create(name: "John", email: "john@example.com", password: "password")
85   User.create(name: "Jane", email: "jane@example.com", password: "password")
86 end
87
88 if __FILE__ == $0
89   seed
90 end
```

```

91
92 def seed
93   User.create(name: "John", email: "john@example.com", password: "password")
94   User.create(name: "Jane", email: "jane@example.com", password: "password")
95 end
96
97 if __FILE__ == $0
98   seed
99 end
```

```

100
101 def seed
102   User.create(name: "John", email: "john@example.com", password: "password")
103   User.create(name: "Jane", email: "jane@example.com", password: "password")
104 end
105
106 if __FILE__ == $0
107   seed
108 end
```

```
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
o rails s
=> Booting Puma
=> Rails 5.0.1 application starting in development on http://localhost:3000
=> Run `rails server -h` for more startup options
Puma starting in single mode...
* Version 3.7.0 (ruby 2.3.3-p222), codename: Snowy Sagebrush
* Min threads: 5, max threads: 5
* Environment: development
* Listening on tcp://0.0.0.0:3000
Use Ctrl-C to stop
```

I



fred at fred-HP-Desktop in ~/Work/packt-pub/expert\_rails\_5/starmail using ruby-2.3.3@starmail

o rails s

=> Booting Puma

=> Rails 5.0.1 application starting in development on http://localhost:3000

=> Run `rails server -h` for more startup options

Puma starting in single mode...

\* Version 3.7.0 (ruby 2.3.3-p222), codename: Snowy Sagebrush

\* Min threads: 5, max threads: 5

\* Environment: development

\* Listening on tcp://0.0.0.0:3000

Use Ctrl-C to stop

□

December 03, 2014

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Open Terminal

Open Tab

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```
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
o rails s
=> Booting Puma
=> Rails 5.0.1 application starting in development on http://localhost:3000
=> Run `rails server -h` for more startup options
Puma starting in single mode...
* Version 3.7.0 (ruby 2.3.3-p222), codename: Snowy Sagebrush
* Min threads: 5, max threads: 5
* Environment: development
* Listening on tcp://0.0.0.0:3000
Use Ctrl-C to stop
```

```
fred@fred-HP-Desktop: ~/Work/packt-pub/expert_rails_5/starmail
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3
o curl -H "Content-Type: application/json" http://localhost:3000/messages
```



```
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
o rails s
=> Booting Puma
=> Rails 5.0.1 application starting in development on http://localhost:3000
=> Run `rails server -h` for more startup options
Puma starting in single mode...
* Version 3.7.0 (ruby 2.3.3-p222), codename: Snowy Sagebrush
* Min threads: 5, max threads: 5
* Environment: development
* Listening on tcp://0.0.0.0:3000
Use Ctrl-C to stop
```

```
fred@fred-HP-Desktop: ~/Work/packt-pub/expert_rails_5/starmail
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3
o curl -H "Content-Type: application/json" http://localhost:3000/messages
```

```
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3@starmail
```

```
o rails s  
=> Booting Puma  
=> Rails 5.0.1 application starting in development on http://localhost:3000  
=> Run `rails server -h` for more startup options
```

```
Puma starting in single mode...
```

```
* Version 3.7.0 (ruby 2.3.3-p222), codename: Snowy Sagebrush
```

```
* Min threads: 5, max threads: 5
```

```
* Environment: development
```

```
* Listening on tcp://0.0.0.0:3000
```

```
Use Ctrl-C to stop
```

```
Started GET "/messages" for 127.0.0.1
```

```
ActiveRecord::SchemaMigration Load
```

```
Processing by MessagesController#index
```

```
Parameters: {"message"=>{}}
```

```
Message Load (0.3ms) SELECT "mess
```

```
[active_model_serializers] Rendered
```

```
utes (0.44ms)
```

```
Completed 200 OK in 11ms (Views: 9.5
```

```
fred@fred-HP-Desktop: ~/Work/packt-pub/expert_rails_5/starmail
```

```
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3
```

```
o
```

```
curl -H "Content-Type: application/json" http://localhost:3000/messages
```

```
[{"id":1,"originator":"thomas","content":"this is my message","recipient":"fred"
```

```
,"status":1},{ "id":2,"originator":"sarah","content":"hello, how are you?","recip
```

```
ient":"paul","status":1},{ "id":3,"originator":"thomas","content":"this is my mes
```

```
sage","recipient":"fred","status":1},{ "id":4,"originator":"sarah","content":"hel
```

```
lo, how are you?","recipient":"paul","status":1}]]%
```

```
fred at fred-HP-Desktop in ~/Work/packt-pub/expert_rails_5/starmail using ruby-2.3.3
```

```
o
```

```
o
```



fred at fred-HP-Desktop in ~/Work/packt-pub/expert\_rails\_5/starmail using ruby-2.3.3@starmail

```
o rails s
=> Booting Puma
=> Rails 5.0.1 application starting in development on http://localhost:3000
=> Run `rails server -h` for more startup options
Puma starting in single mode...
* Version 3.7.0 (ruby 2.3.3-p222), codename: Snowy Sagebrush
* Min threads: 5, max threads: 5
* Environment: development
* Listening on tcp://0.0.0.0:3000
Use Ctrl-C to stop
Started GET "/messages" for 127.0.0.1 at 2017-02-20 20:12:29 +0000
  ActiveRecord::SchemaMigration Load (0.4ms)  SELECT "schema_migrations".* FROM "schema_migrations"
Processing by MessagesController#index as */*
  Parameters: {"message"=>{}}
  Message Load (0.3ms)  SELECT "messages".* FROM "messages"
[active_model_serializers] Rendered ActiveModel::Serializer::CollectionSerializer with ActiveModelSerializers::Adapter::Attributes (0.44ms)
Completed 200 OK in 11ms (Views: 9.5ms | ActiveRecord: 2.5ms)
```

## How to Test a REST api

The REST API is a standard for building web services. It is a standard for building web services that is based on the HTTP protocol. The REST API is a standard for building web services that is based on the HTTP protocol. The REST API is a standard for building web services that is based on the HTTP protocol.

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December 03, 2014

🕒 Reading time ~ 14 minutes



# How to test a REST api from command line with curl

If you want to quickly test your REST api from the command line, you can use [curl](#). In this post I will present how to execute GET, POST, PUT, HEAD, DELETE HTTP Requests against a REST API. For the purpose of this blog post I will be using the REST api developed in my post [Tutorial – REST API design and implementation in Java with Jersey and Spring](#)

I

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# Authenticating API Clients

Next Video

