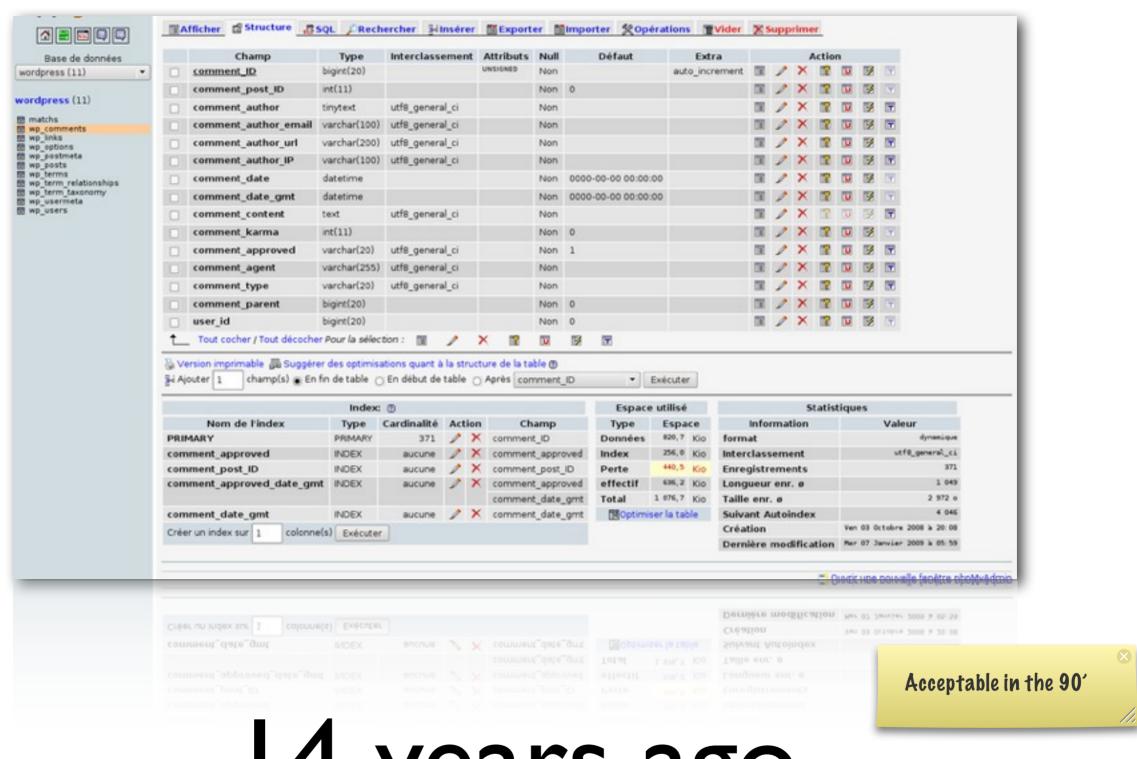
RailsAdmin

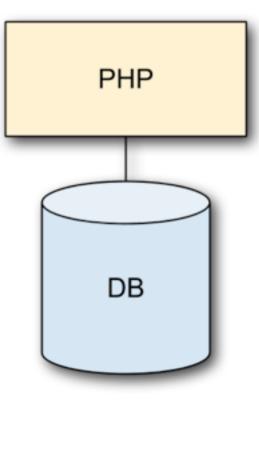
Overview & Best practices



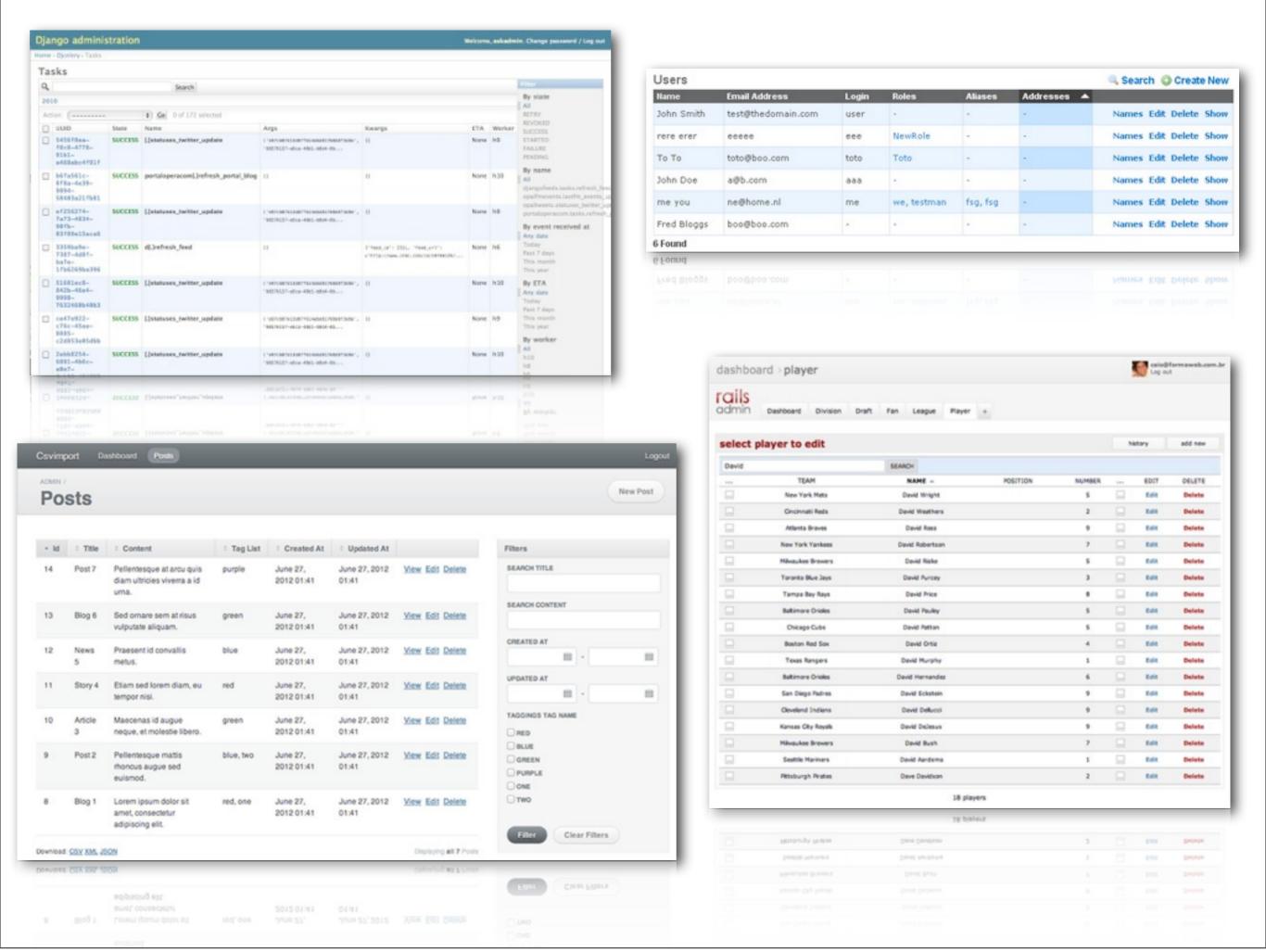
14 years ago

Data Admin, stand-alone

- + Pros
 - Reliable
 - Powerful
- Cons
 - No business rules whatsoever







Data Admin, in the application

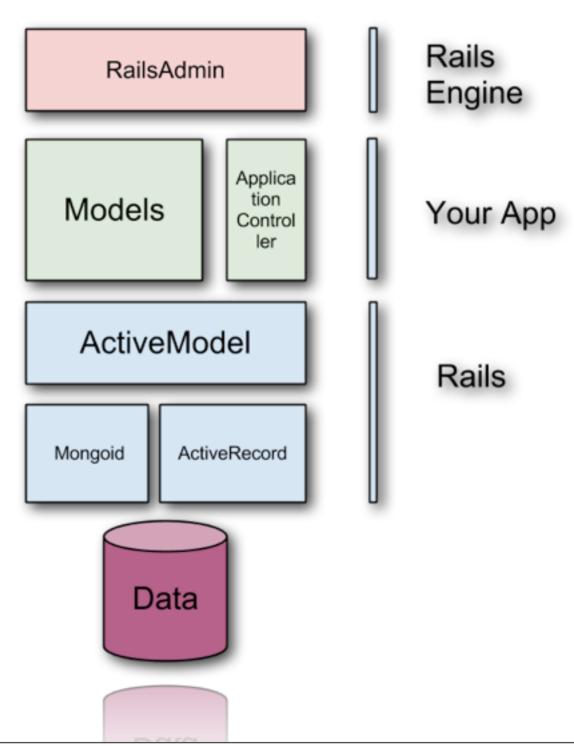
+ Pros

In theory...

 Leverages the whole application or some parts for business rules etc.

Cons

- No direct (fast) DB administration
- Your code?



RailsAdmin

ActiveAdmin

- Admin generator
- Immediate startup
- Steep learning curve
- Extensible
- Powerful when leverages Rails
 Models and Cancan

- Admin builder
- Slower startup
- Simple DSL
- Usable
- Good for ad-hoc admin building when Models/Cancan rules don't infer the UI

Grain of salt, common sense, etc. //

Pitfall

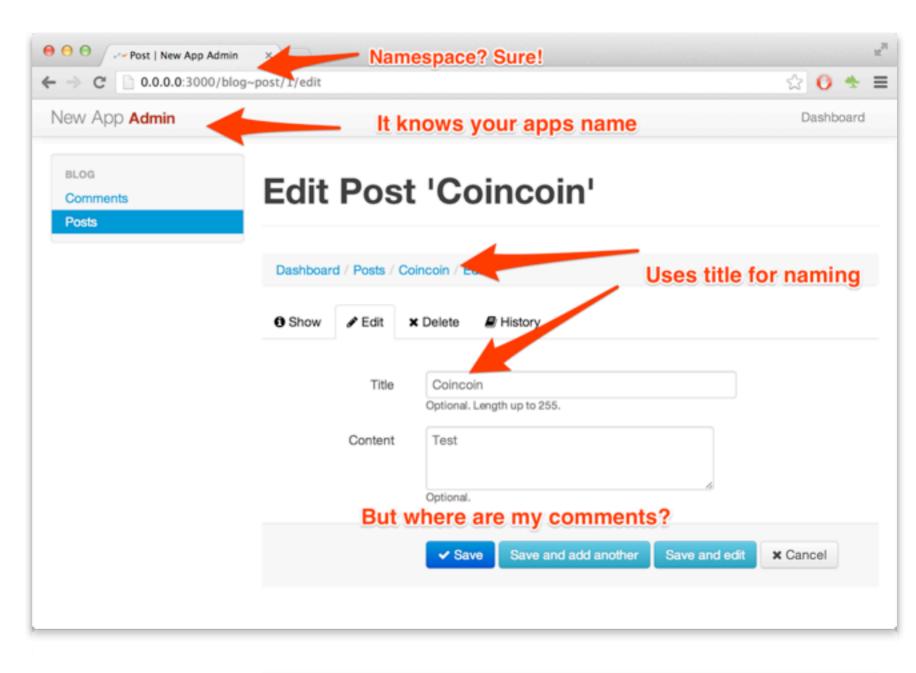
ActiveModel does not provide anything for associations!

- ActiveAdmin lets you do the work
 - => with some help from Formtastic :/
- RailsAdmin shortcuts ActiveModel
 - => Complex custom code laying on the ORMs:/
 - But hey! it works®*

* Unless you screwed up your models associations definitions

Minimum installation

- rails new new_app
- rails g model blog::post title:string content:text
- rails g model blog::comment content:text post:belongs_to
- gem 'rails_admin'
- mount RailsAdmin::Engine => "



But where are my comments?

Save and add another Save and edit * Cancel

Big picture

Actions

Map routing to templates and controller

Sections

Map field configuration to each action

Fields

Handle fields configurations

Actions-Sections CRUD mapping

- new => new < edit < base
- edit => update < edit < base
- edit/new nested => nested < edit < base
- edit/new modal => modal < edit < base
- index => list < base
- export => export < base</pre>

Example

```
index
rails_admin do
 list do
   field :created_at
   field :title
                     edit, new, modal
 end
 edit do
   field :content
   field :post
 end
                                 nested only
 nested do
   field :content
 end
end
```

```
config.model 'PlayerType' do
  list do
    field :name
    field :description
  end
  show do
    field :name
    field :description
    field : id
    field :created_at
    field :updated_at
  edit do
    field :name
    field :description
    field :product_types
  end
end
config.model 'PlayerVersion' do
  list do
    field :name
    field :description
    field :updated_at
  end
  show do
    field :name
    field :description
    field :_id
    field :created at
    field :updated_at
  end
  edit do
    field :name
    field :description
  end
end
config.model 'ProductType' do
  list do
    field :name
  end
```

The issue...

 Never-ending list of section/fields definitions

Solutions

- Use configure as much as you can (doesn't force the field list in opt-in mode)
- Use order
- Move each model configuration to a rails_admin block in class definition
- Hide fields you don't need instead of listing them (less overhead usually)

Associations

class Blog::Post < ActiveRecord::Base</pre> has_many :comments end Title Optional. Length up to 255. Content I don't want the #1 thing :(Optional. I don't want to see other Search Comments posts comments :(Blog::Comment #1 + Add a new Comment Choose all Clear all Optional.

The associations

- has_many => nested
- has_one => nested
- belongs_to => modal
- has_many:through => modal
- has_and_belong_to_many => modal
- It makes sense®

Back to our models...

```
class Blog::Comment < ActiveRecord::Base</pre>
  belongs_to :post
  def title
    content.try(:[], 0..20)
                                                            Title
                                                                    First post
  end
                                                                    Optional. Length up to 255.
end
                                                          Content
class Blog::Post < ActiveRecord::Base</pre>
  has many :comments
                                                                    Optional.
  accepts_nested_attributes_for :comments
                                                                         + Add a new Comment
                                                        Comments
                                                                    Optional.
                                                                                                       I don't need the post here,
end
                                                                                                       I'm editing it!
                                                                     First comment
                                                                    First comment
                                                          Content
                                                                                                             + Add a new Post
                                                            Post
                                                                    First post
                                                                    Optional.
```

You tell your ORM about it

```
class Blog::Comment < ActiveRecord::Base</pre>
   belongs_to :post, inverse_of: :comments
   def title
                                                       Title
                                                               First post
     content.try(:[], 0..20)
                                                              Optional. Length up to 255.
   end
                                                     Content
end
                                                              Optional.
                                                                   + Add a new Comment
                                                   Comments
                                                              Optional.
                                                                            Comment (new)
                                                               First comment
                                                    Content
                                                              Optional.
```

Stay on the Golden path

- Convention over configuration!
- RailsAdmin gets as much intel as it can from your models:
 - Fields
 - Associations
 - Validations
- Don't configure RailsAdmin when you can tweak your app to Rails' best standards!



But wait! Admin! Passwords and stuff!

- gem 'devise'
- rails g devise:install
- rails g devise user
- rails g migration add_user_id_to_blog_posts user:belongs_to

```
class Blog::Post < ActiveRecord::Base
  has_many :comments
  belongs_to :user

accepts_nested_attributes_for :comments
end</pre>
```

config/rails_admin.rb:

```
RailsAdmin.config do |config|
  config.current_user_method &:current_user
end
```

Signed in successfully.

Who am I?

```
def name
  email.try(:split, '@').try(:first).try(:humanize)
end
                             Dashboard
                                        username@example.com
                                                             Log out
  Edit User 'Username'
    Dashboard / Users / Username / Edit
                                      Nailed it!
    Show
             Edit
                                          This is me.
                             History
                    ★ Delete
                       username@example.com
               Email
                      Required. Length up to 255.
           Password
                      Required. Length of 8-128.
```

This is called authentication. Do you have authorization?

- gem 'cancan'
- rails g migration add_profile_to_users profile:string
- config/rails admin.rb:

```
config.authorize_with :cancan
```

rails g cancan:ability

```
def initialize(user)
  if user.profile == 'admin'
    can :manage, :all
  end
end
```

CanCan::AccessDenied in RailsAdmin::MainController#edit

You are not authorized to access this page.

Some other profiles

```
def initialize(user)
  case user.profile
  when 'admin'
    can :manage, :all
  when 'writer'
  can :access, :rails_admin
    can :dashboard
    can :manage, Blog::Post, { user_id: user.id }
  end
end
Own posts only
```

- Admin can do anything
- Writer can
 - access rails_admin
 - access the dashboard
 - CRUD Blog::Post that he owns
 - for new posts, user_id will be forced to his id

Ok, what do I get for my writers?



At last, some RailsAdmin field configuration!

```
class Blog::Post < ActiveRecord::Base</pre>
  has_many :comments
  belongs_to :user
  accepts_nested_attributes_for :comments
  rails admin do
    configure :user do
      visible do
        bindings[:controller].current_ability.can? :edit, User
      end
   end
    configure :comments do
      visible do
        bindings[:controller].current_ability.can? :edit, Blog::Comment
      end
   end
 end
end
```

Deal with serialized fields

- rails g migration
 add_metadata_to_blog_posts
 metadata:text
- models/blog/post.rb serialize :metadata, Hash

Title	I need a title	
	Optional. Length up to 255.	
Content	Some content too good to print	
	Optional.	
Metadata	!ruby/hash:ActionController::Parameters block: front_page subtitle: some subtitle needed as well	
	Optional.	

Now what?

- It's error prone :(
- It's ugly :(
- It's not user friendly:(
- It's dangerous :(
- What should I do?

Use some 'virtual' fields?

```
configure :block do
  def value
    bindings[:object].metadata[method_name]
  end

def allowed_methods
    'metadata'
  end

def parse_input(params)
    params['metadata'] ||= bindings[:object].metadata
    params['metadata'][method_name] = params.delete(method_name)
  end
end
```

- You don't need your object to respond to 'block'!
- You can create RailsAdmin fields out of the blue
- You just need to define value and parse_input methods (in & out the form)
- allowed_methods lets you modify the mass-assignable params on the object (safety)

Say I need another one like 'block'?

- Let's create a metadata RailsAdmin field type, in our application
- lib/rails_admin/metadata.rb

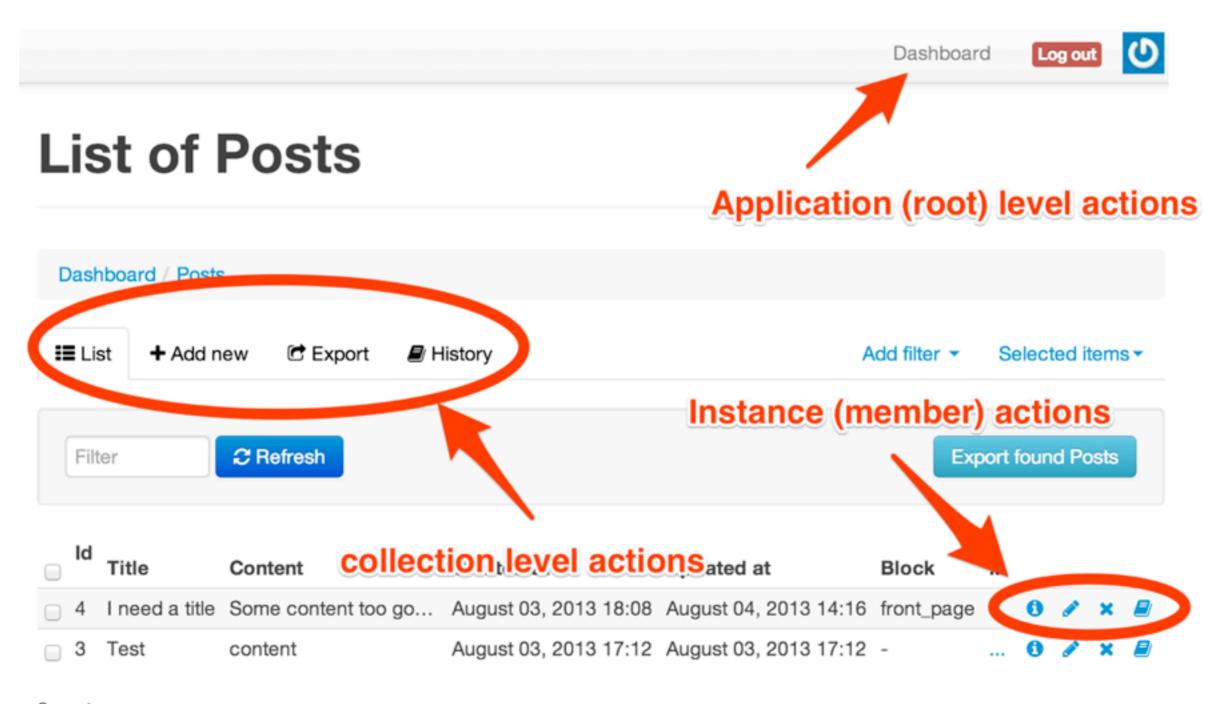
```
require 'rails_admin/config/fields/base'
module RailsAdmin
  class Metadata < RailsAdmin::Config::Fields::Base</pre>
    RailsAdmin::Config::Fields::Types::register(self)
    def value
      raise 'No metadata!' unless bindings[:object].respond_to?(:metadata)
      bindings[:object].metadata[method_name]
    end
    def allowed methods
      'metadata'
    end
    def parse_input(params)
      params['metadata'] ||= bindings[:object].metadata
      params['metadata'][method_name] = params.delete(method_name)
    end
  end
end
```

Time to leverage

```
Block
                                                            front_page
configure :block, :metadata
                                                           Optional.
configure :sticky, :metadata do
  view_helper :check_box
                                                Sticky
end
configure :published, :metadata do
                                                           Optional.
  view_helper :check_box
end
                                             Published
configure :priority, :metadata do
  view_helper :number_field
                                                           Optional.
  default_value 0
end
                                               Priority
                                                            0
                                                           Optional.
```

No pollution in the model!

Some actions?



2 posts

I need to publish my posts!

```
require 'rails_admin/config/actions/base'
                                                                  publish do
module RailsAdmin
                                                                    only 'Blog::Post'
  class Publish < RailsAdmin::Config::Actions::Base</pre>
                                                                    link icon 'icon-check'
    RailsAdmin::Config::Actions.register(self)
                                                                  end
    register_instance_option :member do
      true
    end
    register_instance_option :http_methods do
      [:get, :post]
    end
                                                            Define an action, then use it
    register_instance_option :controller do
      Proc.new do
        if request.post?
          @object.metadata['published'] = true
          if @object.save && false
            redirect_to_on_success
            flash[:error] = 'You probably screwed up smtg again'
          end
        end
      end
    end
  end
end
```

Then the view part, simple stuff

```
h4 Publish "#{@object.title}"?
  = form tag :url => publish path(:model name => @abstract model.to param, :object => @object), :method => 'post' do
    .form-actions
      button.btn.btn-danger type="submit" data-disable-with="#{t('admin.form.confirmation')}"
        i.icon-white.icon-ok
        = t("admin.form.confirmation")
      | &nbsp:
      button.btn type="submit" name="_continue" data-disable-with="#{t('admin.form.cancel')}"
        i.icon-remove
        = t("admin.form.cancel")
                                    The view goes to rails_admin/
                                    main/publish.slim
                                    Then add some translations for
                                    proper integration
en:
  hello: "Hello world"
                                                         Show
                                                                    Edit
                                                                                       History
                                                                                                   Publish
  admin:
                                                                            ★ Delete
    actions:
       publish:
                                                       Publish "I need a title"?
         title: "Publish %{model_label}"
         menu: "Publish"
         breadcrumb: "Publish"
                                                            ✓Yes, I'm sure
                                                                            xCancel
         link: "Publish %{model_label}"
         done: "published"
```

I'm in trouble

- Check that your models are ok (rails c)
- bundle open rails_admin
- trace @abstract_model, @object in actions
- trace @abstract_model, bindings[:object] in fields

Someone said I need tests, I probably need tests, did I say I need tests?

mount RailsAdmin::Engine => '', as: 'rails_admin'

```
## Go somewhere
                                                                   https://github.com/sferik/rails_admin/wiki/Rspec-with-capybara-examples
visit rails admin.dashboard path
visit rails_admin.new_path(model_name: 'blog~post')
visit rails_admin.edit_path(model_name: 'blog~post', id: post.id)
## Assert you landed somewhere
expect(current_path).to eq rails_admin.dashboard_path
expect(current_path).to eq rails_admin.new_path(model_name: 'blog~post')
expect(current path).to eq rails admin.edit path(model name: 'blog~post', id: post.id)
## Click links
# From anywhere
page.find('.dashboard_root_link a').click # to a root action
page.find('[data-model=blog~post] a').click # to any model index
# From any collection action
page.find('.new_collection_link a').click # to another collection action
# From any member action
page.find('.edit_member_link a').click # to another member action
# From the dashboard
page.find('.blog_post_links .index_collection_link a').click # to any collection action
# From the index page of a model
page.find('.blog_post_row[1] .show_member_link a').click # to any row's member action
## Assert the content
expect(page.find('#blog_post_title')).to have_content 'Blog Post Title'
                                                                                       # of an edit/new form input
expect(page.find('.blog_post_row[1] .title_field').to have_content 'Blog Post Title' # of an index table row cell
                                                                                       # of a flash message
expect(page.find('.alert')).to have_content 'Post successfully created'
```

Thanks for listening!

Full example code https://github.com/bbenezech/blog_admin

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Freelance