

# Authenticating University Users

Some applications may need to enable Sheffield University users to login. To enable this we provide the epiCas Gem.

## Creating a Devise user model

Devise requires a model to authenticate against. For a non-university application this model will store the password hash along with the appropriate user identifier, often email or username. For a University user this will store their username and various metadata. University users are created in your database when they first login to the system. This allows any University user to login without having to store every user's details. To generate the model for Devise run:

```
bundle exec rails generate devise User
```

Open the migration created by devise in **db/migrate**, the full file path includes a timestamp but should look like this:

```
db/migrate/20230124135159_devise_create_users.rb
```

Inside that file you will find the details to create the database table backing the User model. Uncomment the lines immediately below **## Trackable**, so that the file now looks like this:

```
## Trackable
t.integer  :sign_in_count, default: 0, null: false
t.datetime :current_sign_in_at
t.datetime :last_sign_in_at
t.string   :current_sign_in_ip
t.string   :last_sign_in_ip
```

## Setting up epiCas

epiCas is provided at [https://git.shefcompsci.org.uk/gems/epi\\_cas](https://git.shefcompsci.org.uk/gems/epi_cas) to install the gem and create a model for Sheffield University users:

Add the gem to your Gemfile

```
gem "epi_cas", git: "git@git.shefcompsci.org.uk:gems/epi_cas.git"
```

Install the new gems:

```
bundle install
```

*Note: you'll need to be connected to the University network when installing the epi\_cas gem.*

Now we need to run an install generator and another task to add the appropriate fields to the User model.

```
bundle exec rails g epi_cas:install
bundle exec rails generate epi_cas:model User
```

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*Note: if you used a different model name when generating your devise user model you need to provide that here instead of `User`.*

Migrate the database:

```
bundle exec rails db:migrate
```

## Working with epiCas

You should now have a User model set up to allow Sheffield University users to login to the system. We can require users to login before accessing specific pages by adding

```
before_action :authenticate_user!
```

*Note: You can set `only` or `except` as a parameter to restrict the actions that require a user to authenticate, see [https://guides.rubyonrails.org/action\\_controller\\_overview.html#filters](https://guides.rubyonrails.org/action_controller_overview.html#filters) for more information.*

You can now start your rails server and attempt to visit the page(s) you have restricted. This should show a page asking for an email address and password. We'll need to adjust this view to ask for a username and password. To do this open

**app/views/devise/sessions/new.html.haml** and adjust the email input field to match this:

```
= f.input :username, autofocus: true, required: true
```

## Customise User Types

Now epiCAS is installed, we need to configure who can log in. To do this, you will need to edit **config/epi\_cas\_settings.yml**.

In this file you will see various configuration options. The only two you need to change today are **groups\_allowed\_to\_log\_in** and **groups\_allowed\_to\_be\_created**. Each University of Sheffield account is assigned to one of the groups listed here.

- **groups\_allowed\_to\_log\_in**

This specifies what types of users can log in. If a user belonging to a group not listed here, or to one of the commented groups, attempts to log in they will not be able to access your application.

- **groups\_allowed\_to\_be\_created**

In addition to their University of Sheffield account, users will need an account in your application to log in. The epiCAS gem provides support for these accounts to be created automatically, meaning that anybody in the University can log in without having an application account created first. This can be really useful for a University system with a large potential user base. If a user's group is listed here they will be able to log in and have an application account created automatically.

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Uncomment the lines containing **student\_undergraduate** in both of these options to allow yourself to log into your application.

## Logging In

You should now be able to visit your application and see a login screen. Enter your Sheffield login details and you should be signed in. Keep in mind that the login screen you see will only be used during development and that in production the application will redirect to the single sign-on service provided by the University.