How do I serve static assets on the web with Elixir using Cowboy and Plug?

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As a web developer, serving static assets is essential. It may be images, JavaScript and CSS or even static HTML pages. Let's take a look at how we could make a very basic web server that serves everything from a static assets folder.

What we're making

We're going to make server in Elixir using `plug_cowboy` that will serve the `assets` folder. This will be very simple and won't do any routing, we'll simply use the `Plug.Static` plug. Take a look at the source code in an example repo here.

How to make a static asset server

Let's start from scratch and create a new project, if you've got an existing project there's only a couple changes to make so you can use this as a guide. ### Create a new project Run `mix new simple_plug_static --sup` to setup the project then add `plug_cowboy` to your dependencies in `mix.exs`

Your `mix.exs` `deps` function should look like this:

```
defp deps do
  [
    {:plug_cowboy, "~> 2.5"}
  ]
end
```

You can update the dependencies afterwards by running `mix deps.get`.

Use `Plug.Cowboy`

The only other step is to update `lib/simple_plug_static/application.ex`.

Update the `children` variable to setup a `Plug.Cowboy`.

```
children = [
  {Plug.Cowboy, scheme: :http, plug: {Plug.Static, at: "/", from: "assets"}, options: [port: 3000]}
]
```

The key part is using `Plug.Static` and providing a couple of options. - `at` specifies the path that's accessible on the server - `from` specifics the directory to serve, in our case let's set this to `assets`

Create some assets to serve

Create the following folder `simple_plug_static/assets` and put some files you want to serve. In the example, I created `hello.txt` but other files should work just the same.

Start the server and try it out

Start the server with `mix run --no-halt`, once it's up and running you should be able to visit localhost:3000/hello.txt in a browser to access the static resources.

That's it.

When to use this

This is a very simple static asset server with almost no configuration. In a real world scenario, it's more common to use a router and serve static assets as part of a larger application.

Resources

- Plug.Static docs