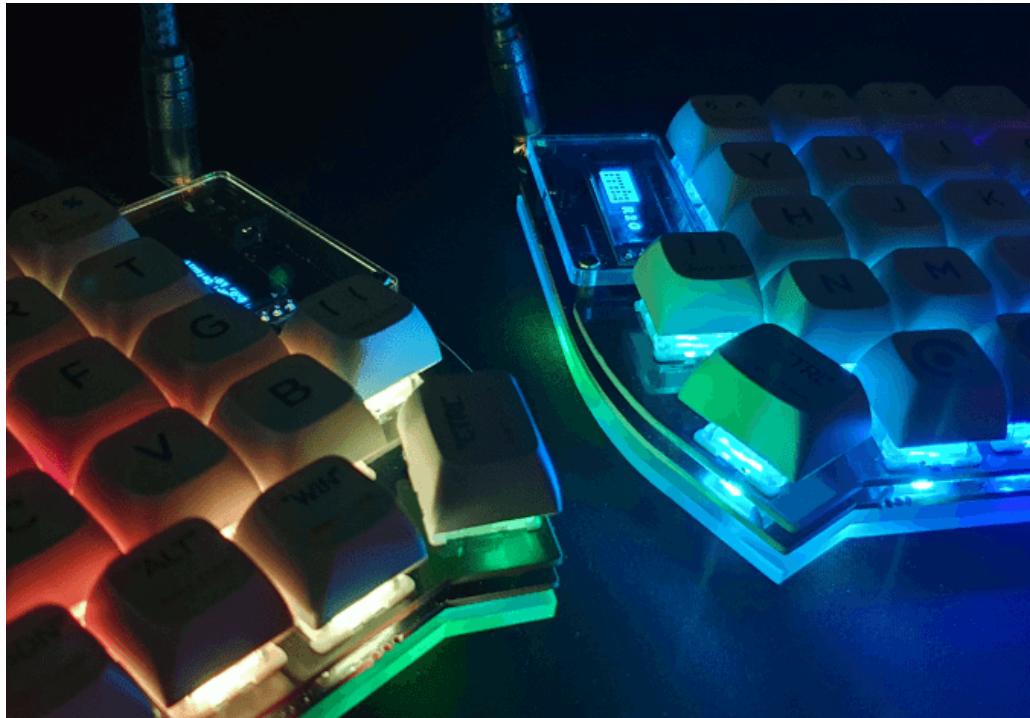


Using Storybook To Preview Single Directory Components

Philip Norton
DrupalCamp Scotland 2025

Philip Norton

- Developer at Code Enigma
- Writer at [#! code](#)
(www.hashbangcode.com)
- NWDUG co-organiser



Source Code

- Talk is available at:
<https://github.com/hashbangcode/druj-storybook-talk> or via QR code.
- All code seen can be found at
<http://bit.ly/3W1bnu0>
- www.hashbangcode.com



What Is Storybook?

- Storybook is a frontend tool for creating UI components.
- Mature product with a plugin system.

The screenshot shows the JPL Explorer 1 Design System interface. The top navigation bar includes search icons, a theme switch between "Default Theme" and "Light Variant", and window control buttons. The left sidebar features a "Find components" search bar and a navigation tree with sections like Introduction, Roadmap, Getting Started, Guides, Foundations, Navigation, Components (Overview, Base, Cards, Blocks), Heroes (Overview, Small, Medium, Docs, HeroMedium, Compact, Video, Large), and a large "Compact" section highlighted in teal.

The main content area displays a featured article with the title "Creating Robots to go Where Humans Can't" and a "VIEW >" button. The background image is a sunset over a rocky coastline. Below the article, a table titled "Controls" lists three properties: "customTag" (string, default -, control News), "customLabel" (string, default -, control Featured), and "feature" (object, default -, control "feature : { url : "news/how-maps-open-reads" }").

Why Talk About Single Directory Components?

- An important part of modern Drupal theme development.
- Can be added to themes or modules.
- Integrates with **Drupal Canvas**.

Contents

- Introduction To Single Directory Components
- Installing the Storybook Module
- Installing and running Storybook

Single Directory Components (SDC)

A *very* short introduction.



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SDC

- They exist in a single directory
(hence the name).

```
example_component/
  example_component.component.yml
  example_component.css
  example_component.js
  example_component.twig
```

SDC - *.component.yml

- The `*.component.yml` file is used to define the structure of the component.

```
name: My Component
```

```
props:
```

```
  type: object
```

```
  properties:
```

```
    # ...
```

```
slots:
```

```
  # ...
```

SDC - *.component.yml

- `props` have defined properties with set data types.

```
props:  
  type: object  
  properties:  
    extra_classes:  
      type: ['string', 'null']  
      title: Extra classes  
    examples:  
      - extrawide, dark
```

- `{{ extra_classes }}` can now be used in the template.

SDC - *.component.yml

- `slots` are for printing content and other SDCs.
- They are much simpler to define.

```
slots:  
  body:  
    title: "Body copy."
```

- `{{ body }}` is now available in the template.

SDC - Props vs Slots

- `props` - Properties or simple elements that the component has. Title, classes, menu depth, display options, etc.
- `slots` - Objects or more complex elements that the component can render. Body copy, images, nested SDCs etc.

SDC - *.component.yml

- Use `libraryOverrides` to inject Drupal libraries into your SDC.

```
libraryOverrides:  
  dependencies:  
    - core/drupal  
    - core/once
```

SDC - *.twig

- A normal twig template that renders the defined structure of the component.
- Example `slot` in a `*.component.yml` file:

```
slots:  
  body:  
    title: Body copy  
    description: The HTML body copy of the element.
```

Twig template:

```
{{ body }}
```

SDC - *.twig

- You should probably add `slots` using the `block` Twig tag.

```
{% block body %}  
  {{ body }}  
{% endblock %}
```

- This allows you to override the value easily.
- You can inject the value in Storybook without having to add `| raw` to your Twig template.

SDC - Other files

- Any `*.css` or `*.js` files will be automatically included as attachments.
- The libraries attached to the theme will also be included when the SDC is rendered in Storybook.

SDC - Other files

- Template and CSS can reference files inside the SDC.

CSS:

```
background-image: url('./assets/background.png');
```

Image:

```

```

SDC - Usage

- With the SDC created we can now add it to our Drupal template.

```
 {{ include('my_theme:example_component', {  
   extra_classes: 'some-class',  
   body: content.body,  
 }) }}
```

SDC - Usage

- An example of rendering an Author content type via an SDC.

```
{{ include('my_theme:author', {  
    author_url: url,  
    name: label,  
    bio: content.field_author_short_bio,  
    avatar: content.field_author_avatar  
}) }}
```

Storybook Module

Storybook Module

- Require and install the Storybook module

```
composer require drupal/storybook  
drush en storybook
```

Storybook Module - Permissions

- Ensure that the correct permissions are set.

```
drush role:perm:add anonymous 'render storybook stories'
```

Storybook Module - Stories

- You need a `*.stories.twig` file for every component you want to preview.
- This file contains a number of examples of the SDC in use.
- You can also add additional markup or other components to the story.

Storybook Module - Stories

```
{% stories exampleComponent with { title: 'Components/Example Component' } %}

{# Define story name and args: #}
{% story default with {
  name: '1. Default',
  args: {
    some_property: 'A value'
  }
} %}

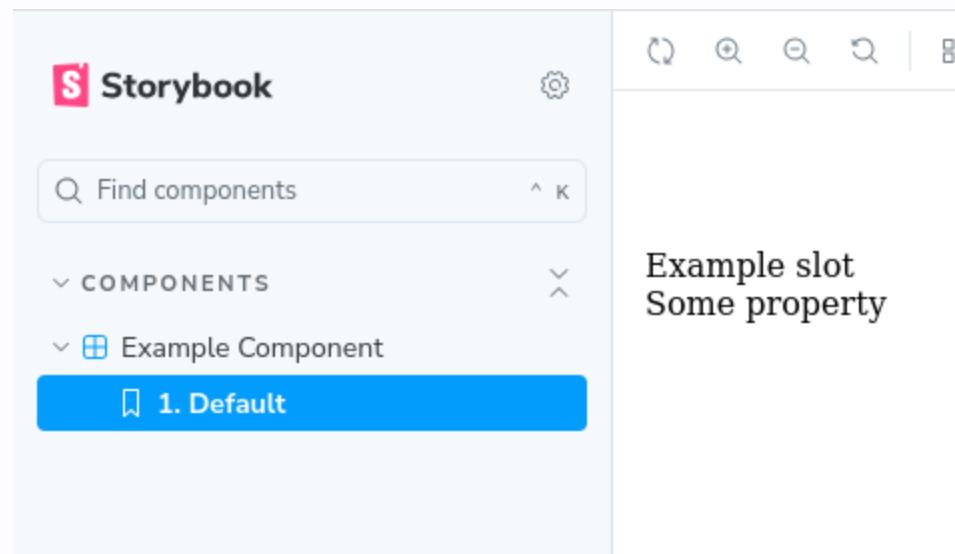
{# Embed component: #}
{% embed 'my_theme:example_component' %}
{% endembed %}

{% endstory %}

{% endstories %}
```

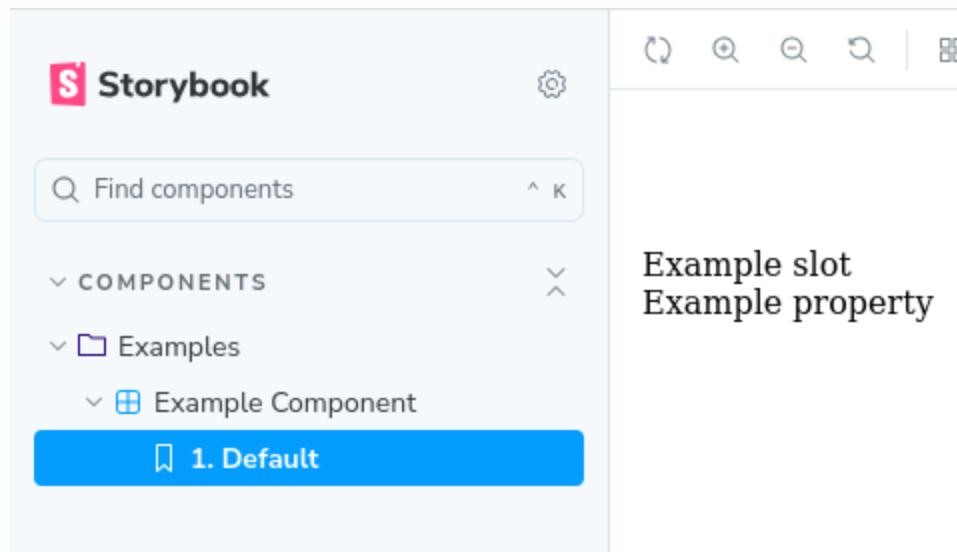
Storybook Module - Stories

```
{% stories exampleComponent with { title: 'Components/Example Component' } %}
```



Storybook Module - Stories

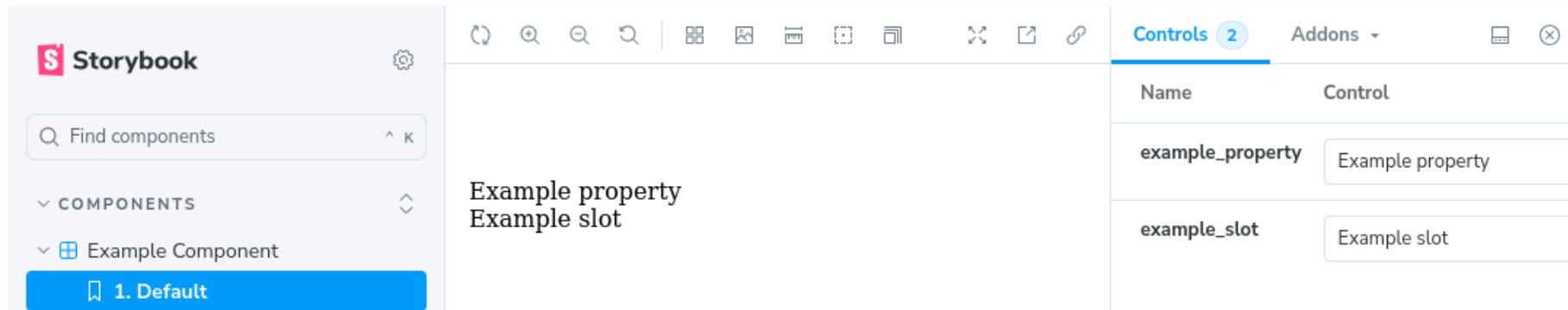
```
{% stories exampleComponent with { title: 'Components/Examples/Example Component' } %}
```



Storybook Module - Stories

- Any args passed to the story are editable properties.

```
{% story default with {  
  name: '1. Default',  
  args: {  
    example_property: 'Example property',  
    example_slot: 'Example slot',  
  }  
} %}
```



Storybook Module - Stories

- Use `include` for simple components with only `props`.

`example_component.twig`

```
<div>
  <h2>{{ title }}</h2>
</div>
```

`example_component.stories.twig`

```
{% story default with {
  name: '1. Default',
  args: {
    title: 'The Title'
  }
} %}
{{ include('my_theme:example_component', {
  title
}) }}
```

Storybook Module - Stories

- Use `embed` with more complex components that have `slots`.

`example_component.twig`

```
<div>
  {% block body %}
    {{ body }}
  {% endblock %}
</div>
```

`example_component.stories.twig`

```
---
  {% story default with {
    name: '1. Default',
    args: {
      body: '<p>Some body copy.</p>'
    }
  } %}
  {% embed 'my_theme:example_component' %}
    {% block body %}
      {{ body|raw }}
    {% endblock %}
  {% endembed %}
---
```

Storybook Module - Stories

- You can add multiple stories for your component.

```
{% story wrapped with {
  name: '2. Wrapped',
  args: {
    example_property: 'Example property',
    example_slot: '<p>Example slot with lots of content.</p>',
  }
} %}
<div style="border:1px solid red; width: 100px;">
  {% embed 'my_theme:example_component' %}
    {% block example_slot %}
      {{ example_slot|raw }}
    {% endblock %}
  {% endembed %}
</div>
{% endstory %}
```

Storybook Module - Drush

- Storybook doesn't understand `*.stories.twig` files.
- They need converting into `*.stories.json`.
- This Storybook module comes with a couple of Drush commands to do this.

Storybook Module - Drush

- Convert all stories in your site.

```
drush storybook:generate-all-stories
```
- This command will only generate the file if nothing has changed.

Storybook Module - Drush

- Watch for changes in your stories and re-generate the files.

```
watch --color drush storybook:generate-all-stories
```

Storybook Module - Drush

- Convert a single story.

```
drush storybook:generate-stories themes/custom/my_theme/components/author/example_component.stories.twig
```

Storybook Module - Stories

- Don't commit the `*.stories.json` files, they are created for the current site and will contain URLs for that site.

Drupal Setup

- Some settings are needed to allow Storybook to connect to Drupal.

Drupal Setup - CORS Prevention

- Add these rules to `development.services.yml` file.

```
parameters:  
  storybook.development: true  
cors.config:  
  enabled: true  
  allowedHeaders: [ '*' ]  
  allowedMethods: [ '*' ]  
  allowedOrigins: [ '*' ]  
  exposedHeaders: false  
  maxAge: false  
  supportsCredentials: true
```

Drupal Setup - CORS Prevention

- Add a reference to the services file from the `settings.php` file.

```
$settings['container_yamls'][] = DRUPAL_ROOT . '/sites/development.services.yml';
```

- Don't put these rules on your production instance!

Drupal Setup - Twig Debug

Turn on the theme development settings (via Drush).

```
drush state:set twig_debug 1  
drush state:set twig_cache_disable 1  
drush state:set disable_rendered_output_cache_bins 1
```

Drupal Setup - Twig Debug

Development settings ☆

These settings should only be enabled on development environments and never on production.

Do not cache markup

Disables render cache, dynamic page cache, and page cache.

Twig development mode

Exposes Twig development settings.

Twig development mode

Twig debug mode

Provides Twig's dump() function for debugging, outputs template suggestions to HTML comments, and automatically recompile Twig templates after changes.

Disable Twig cache

Twig templates are not cached and are always compiled when rendered.

Save settings

Storybook

Storybook - Install

- Install Storybook in a separate directory, away from your Drupal root.

```
mkdir tests && cd tests  
npm init -y  
npx storybook init --type server
```

Storybook - Install

- This will give you a directory containing the following.

```
.storybook  
stories  
node_modules  
package.json  
package-lock.json
```

Storybook - Configure

- Edit the `.storybook/main.js` file to point Storybook at your stories.

```
"stories": [  
    ".../..../web/themes/custom/my_theme/components/**/*.{stories.@(json|yaml|yml)}"  
],
```

Running Storybook

- Storybook is a JavaScript application that can be run on its own.

```
npm run storybook
```

- This will open a browser window with the address <http://localhost:6006>.

Running Storybook - DDEV

- If you are using DDEV then you can run Storybook from inside the web container, with some config.

```
web_extra_exposed_ports:  
  - name: storybook  
    container_port: 6006  
    http_port: 6007  
    https_port: 6006  
web_extra_daemons:  
  - name: node.js  
    command: "tail -F package.json > /dev/null"  
    directory: /var/www/html/tests
```

Running Storybook - DDEV

- To stop DDEV complaining you may want to add
--no-open flag to the relevant line in the
package.json file to prevent the browser opening.

```
"scripts": {  
  "storybook": "storybook dev -p 6006 --no-open",  
  "build-storybook": "storybook build"  
},
```

Building Storybook

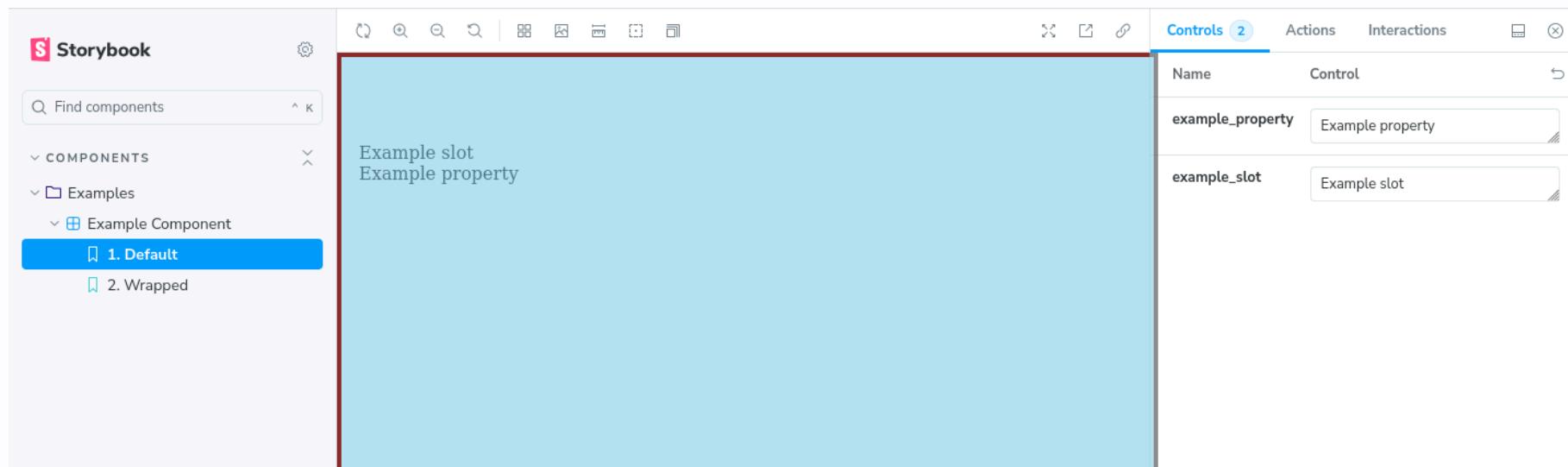
- Storybook can also be built as a static website.

```
npm run build-storybook
```

- The static site can be deployed and served as a site.
- This means that you can host Storybook and demo your SDCs to clients before they are written into Drupal template.

Storybook - SDC

- Storybook works by showing off your SDCs as they exist in your site.
- The whole mid section here is an iframe that points to Drupal.



Building Storybook - Hosting

- Use the following nginx configuration.

```
location ^~ /storybook-static {  
    add_header "Access-Control-Allow-Origin" *;  
    add_header "Access-Control-Allow-Methods" "GET, POST, OPTIONS";  
    disable_symlinks off;  
    alias /your/project/directory/tests/storybook-static;  
    index index.html;  
}
```

Buidling Storybook - Hosting

- Extra configuration is needed for external files in your Drupal site.

```
location @rewrite {  
    rewrite ^ /index.php;  
}  
  
location ~* \.(js|css|woff|woff2|ttf)$ {  
    add_header Access-Control-Allow-Origin '*';  
    add_header X-Content-Type-Options nosniff;  
    try_files $uri @rewrite;  
    expires -1;  
    log_not_found off;  
}
```

Workflow

- A workflow for building a component.
 - Start building your SDC
 - Create a story for the component
 - Build (or run) Storybook
 - Develop the story inside Storybook
 - Once the SDC is complete, add it to your Drupal template.

Demo

Tips

- Look for CORS errors.
- If you only see a blank screen, check Drupal logs.
- Don't commit your `*.stories.json` files, build them on deploy.
- Storybook loves to cache the sidebar.
- Storybook has lots of plugins, check a few of them out.

Tips

- Be aware that Drupal will wrap some things with extra elements. That might throw off your positioning and margins.
 - Understand `props` and `slots`.
 - Setup a styleguide storybook.
 - Don't abstract too much with SDC.
 - Don't try to cover too much with SDC.

Alternatives

Alternatives

- SDC - Component library

Components Preview

Find components

My Theme components

Author

Author - my_theme

Show code

 Phil Norton

Phil is the founder and administrator of [#! code](#) and is an IT professional working in the North West of the UK.

Accessibility Issues

This is not an exhaustive check, and WCAG issues may still be present. Please perform additional accessibility tests for full compliance.

- No accessibility issues found!

Alternatives

- Single Directory Components Styleguide

The screenshot shows a web-based administrative interface for a "Styleguide". The top navigation bar includes "Manage", "Shortcuts", "admin", "Announcements", and "Edit" buttons. Below the navigation is a horizontal menu bar with links for "Content", "Structure", "Appearance", "Extend", "Configuration", "People", "Reports", and "Help". On the left side, there is a sidebar with a logo and sections for "Styleguide" (Colors, Text), "Ungrouped" (Example Component, Example Demo), and "Ratings". The main content area displays a hierarchy of headings: **This is an H1**, **This is an H2**, **This is an H3**, **This is an H4**, **This is an H5**, and **This is an H6**. Below these headings is a paragraph of placeholder text: "This is a paragraph with lorem ipsum. [Lorem ipsum dolor sit amet](#), consectetur adipiscing elit. Nam faucibus quam ut tincidunt condimentum. Aenean vulputate velit vel erat consectetur, sed malesuada metus vulputate. Aliquam ex odio, pretium non quam ut, varius suscipit velit. Maecenas odio neque, maximus a ultricies eu, mattis sed ex. Maecenas purus felis, porttitor in tempor at, condimentum ac mi. Donec lacinia lorem quis nisi consectetur mollis. Fusce pellentesque nulla a fringilla sodales. Sed a lorem orci. Vivamus fringilla nisl at limula dismmissim faucibus".

Alternatives

- Storybook SDC Addon
- Plugin for Storybook that allows you to build SDCs as native Storybook stories.

Resources

- Storybook
- Storybook Module
- Drupal Documentation on SDC
- Drupal 11: Using Storybook To Preview Single Directory Components

Questions?

- Slides:

<https://github.com/hashbangcodestorybook-talk>



Thanks!

- Slides:
[https://github.com/hashbangcod
storybook-talk](https://github.com/hashbangcod/storybook-talk)

