

adaptTo()

EUROPE'S LEADING AEM DEVELOPER CONFERENCE

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SPA Editing with Sling to the rescue

Gabriel Walt, Hanish Bansal, Sharanya Vinod – Adobe

Single Page Applications

DEFINITION

The page doesn’t reload when the visitor navigates.

IMPLIES

→ The frontend consumes content as JSON from the backend.

→ The frontend renders the view with JavaScript.

~~IMPLIES~~ DOES **NOT** NECESSARILY IMPLY

→ Authors don’t control the view as it’s decoupled from the backend.

→ Developers need to implement each view in the frontend.

Form-based editing

AUTHORS

- ⊕ Form-based content editing offers a guided process.
- ⊕ Authors can be faster and more systematic.
- ⊖ Authors cannot create content-specific layout.
- ⊖ Authors cannot optimize the content to the context.

DEVELOPERS

- ⊕ Content retrieval follows a strict content schema.
- ⊕ Developers can be faster and have more freedom.
- ⊖ Developers become a bottleneck in the creation process.

Demo: in-context editing

The demo works in both AEM Cloud Service and 6.5.

Page Model vs GraphQL

Both content API can be used together.

Use GraphQL JSON

- When the developer owns the layout, the developer knows best what properties are necessary to render the content.

Use Page Model JSON

- When the author owns the layout, the configured properties are expected to be considered by the rendering.

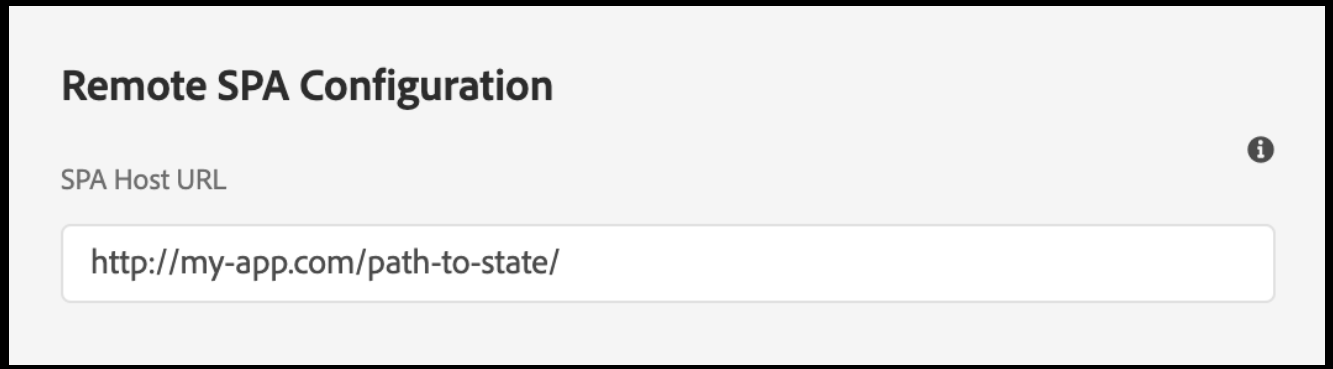
In-context editing

1. Authors can preview the content within the context.
   - → The editor loads the experience as it is delivered to the visitors.
2. Authors can optimize the content to the context.
   - → The editor recognizes the content items originating from its backend and allows to edit them.
3. Authors can insert content with layout.
   - → The editor offers building blocks (components) to create content and layout.

1. Load the experience

Currently done by the remote page component:

- Set the external URL of the state to load with a page property.



1. Editor to load the experience

Currently done by the remote page component:

- Set the external URL of the state to load with a page property.
- Requires the SPA to provide an `asset-manifest.json`

my-app.com/asset-manifest.json


```
{
  - files: {
        static/js/0.chunk.js: "/static/js/0.chunk.js",
        static/js/0.chunk.js.map: "/static/js/0.chunk.js.map",
        main.js: "/static/js/main.chunk.js",
        main.js.map: "/static/js/main.chunk.js.map",
        runtime-main.js: "/static/js/bundle.js",
        runtime-main.js.map: "/static/js/bundle.js.map",
        index.html: "/index.html",
        static/media/icon-close.svg: "/static/media/icon-close.f227c489.svg",
        static/media/icon-loading.svg: "/static/media/icon-loading.200bc7ed.svg",
        static/media/wknd-logo-dk.svg: "/static/media/wknd-logo-dk.36593320.svg"
    },
  - entrypoints: [
        "static/js/bundle.js",
        "static/js/0.chunk.js",
        "static/js/main.chunk.js"
    ]
}
```

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1. Editor to load the experience

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- Set the external URL of the state to load with a page property.
- Requires the SPA to provide an `asset-manifest.json`
- Provided by github.com/adobe/aem-spa-project-core

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1. Editor to load the experience

Currently done by the remote page component:

- Set the external URL of the state to load with a page property.
- Requires the SPA to provide an `asset-manifest.json`
- Provided by github.com/adobe/aem-spa-project-core
- Available in github.com/adobe/aem-project-archetype with option `frontendModule=react` or `angular`

2. Editor to recognize editable content

Information required to make a content item editable:

- Content ID → The Sling resource path
- Content type → The Sling resource type

♡ Thank you, Sling!

2. Editor to recognize editable content

In the HTML DOM rendered by the SPA:

- Resource path: `data-cq-data-path`
- Resource type: `data-cq-resource-type`

```
<html lang="en">
▼<head>
    <meta charset="UTF-8">
    <title>My Single Page App</title>
    <link rel="stylesheet" href="/style.css" type="text/css">
    <script src="/script.js" defer></script>
  </head>
▼<body>
  ▼<div class="cmp-container" data-cq-data-path="/content/my-app/path-to-state/jcr:content/root" data-cq-resource-type="my-app/components/container">
    ▼<div class="cmp-title" data-cq-data-path="/content/my-app/path-to-state/jcr:content/root/title" data-cq-resource-type="my-app/components/title">
        <h1>Welcome!</h1>
      </div>
    ▼<div class="cmp-text" data-cq-data-path="/content/my-app/path-to-state/jcr:content/root/text" data-cq-resource-type="my-app/components/text">
        <p>Hello World</p>
      </div>
    </div>
  </body>
</html>
```

2. Editor to recognize editable content

In the JSON retrieved, this information is required too:

my-app.com/path-to-state.model.json

```
{
  title: "My Single Page App",
  :type: "my-app/components/page",
- :items: {
    - root: {
        :type: "my-app/components/container",
      - :items: {
          - title: {
              title: "Welcome!",
              type: "h1",
              :type: "my-app/components/text"
            },
          - text: {
              text: "Hello World",
              :type: "my-app/components/text"
            }
        },
      - :itemsOrder: [
            "title",
            "text"
        ]
    }
  },
- :itemsOrder: [
      "root"
  ]
}
```

→ Resource path: /content/my-app/path-to-state/jcr:content
Resource type: my-app/components/**page**

→ Resource path: /content/my-app/path-to-state/jcr:content/**root**
Resource type: my-app/components/**container**

→ Resource path: /content/my-app/path-to-state/jcr:content/root/**title**
Resource type: my-app/components/**title**

→ Resource path: /content/my-app/path-to-state/jcr:content/root/**text**
Resource type: my-app/components/**text**

3. Editor to offer content building blocks

Map the JS component to the resource types:

```
import { withMappable } from "@adobe/aem-react-editable-components";

const TextRender = ({ cqPath, text }) => {
   return (<div className="cmp-text"><p>{text}</p></div>);
};

export const Text = withMappable(TextRender,
   { resourceType: "my-app/components/text", … });
```

3. Editor to offer content building blocks

Delegate the layout to a container component:

```
import { ResponsiveGrid } from "@adobe/aem-react-editable-components";

export const Container = withMappable(ResponsiveGrid,
   { resourceType: "my-app/components/container", … });
```

```
<Container
   pagePath="/content/my-app/path-to-state"
   itemPath="root"/>
```

3. Editor to offer content building blocks

The layout is passed to the JS ResponsiveGrid component as CSS classes in the JSON:

my-app.com/path-to-state.model.json

```
{
    title: "My Single Page App",
    :type: "my-app/components/page",
  - :items: {
      - root: {
            :type: "my-app/components/container",
            gridClassNames: "aem-Grid aem-Grid--12 aem-Grid--default--12",
          - columnClassNames: {
                title: "aem-GridColumn aem-GridColumn--default--4",
                text: "aem-GridColumn aem-GridColumn--default--8"
            },
          - :items: {
              - title: {
                    title: "Welcome!",
                    type: "h1",
                    :type: "my-app/components/text"
                },
```

What's new?

- **Remote page component**
  Open an existing SPA from the AEM Page Component
  - Support for Angular, in addition to React
  - Capability to open child states directly
- **Virtual component support**
  The content structure can also be driven by the SPA.

These two new capabilities are sometimes referred to as "SPA Editor 2.0".

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Demo: the code setup

The code samples work in both AEM Cloud Service and 6.5.

Get started right away!

Try the remote SPA tutorial:

→ bit.ly/remote-spa-tutorial

SPA Editor overview:

→ bit.ly/spa-editor-overview