



adaptTo()

EUROPE'S LEADING AEM DEVELOPER CONFERENCE
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AEM CF Extras
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THE PROBLEM

How do we store structured data that represents “things” inside AEM?

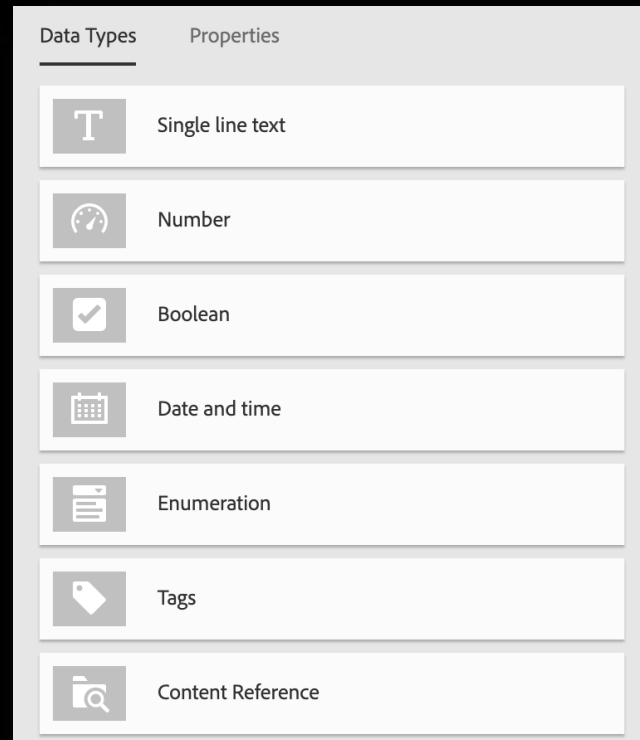
- **EXTERNAL DATABASE**
 - Need to configure JDBC
 - AEM authors cannot update data without customization
- **PAGE PROPERTIES**
 - Developers and a deploy are needed to add new page properties
 - Not really meant for this



- **STRUCTURED CONTENT FRAGMENTS**
 - Introduced in AEM 6.4
 - Model updates do not require developers
 - Separate from pages and components
 - Stored as DAM assets
 - Customizable
 - API accessible

As of AEM 6.5

- **Single line text** - short text
- **Multi line text** - descriptive text
- **Number** - numeric value
- **Boolean** - a checkbox
- **Date and Time** - date / time selection
- **Enumeration** - a dropdown
- **Tags** – select a tag
- **Content Reference** – choose an asset, page, etc.



- **CFX ID** - Displays an auto generated UUID for a CF based on its path.
- **CFX Parent Field** - A virtual reference to an attribute in a content fragment located in a parent folder.
- **CFX Child Reference** - A reference to a set of child content fragments. An optional relative folder can be specified along with the desired model type to include.
- **CFX Content Fragment Reference** - Similar to the out of box Content Reference field except it can be restricted to a particular model type. This comes into play with the GraphQL API.

- **CFX Image Field** - Points to an image in the DAM and shows a thumbnail preview of the currently selected image.
- **CFX Date Time** - Similar to the out of the box Date and Time field except you can set it to handle just date, just time, or date and time.
- **CFX Tags** - Like the out of box Tags field except it allows the choice of single or multiple tag selection.
- **CFX Multi line text** - Like the out of box Multi line text field except it allows for adding multiple text areas
- **CFX Tab** - Allows for fields in a model to be broken up into separate tabs

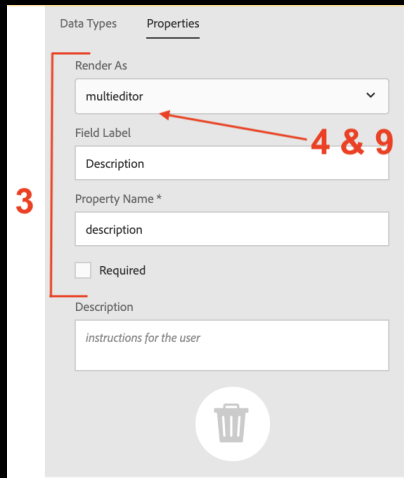
TAB PLACEHOLDER

- It is necessary to override some out of box code for this
- Used placeholder fields as a way to mark where the tabs should be rendered
- Written in HTL
- Falls back to the out of box JSP if no tabs are present
- Out of box code is at
`/libs/dam/cfm/admin/components/authoring/elementeditor/elementeditor.jsp`
- CFX code is at
`/apps/dam/cfm/admin/components/authoring/elementeditor/elementeditor.html`

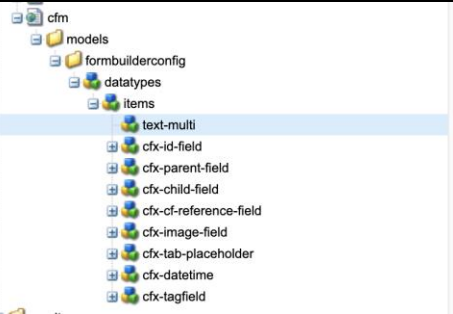
PIECES OF A MODEL



2: (fieldPropResourceType) is almost always the same



- ### 7: Order of types
- 1 Multi line text
 - 2 Single line text
 - 3 Boolean
 - 4 Date and time
 - 5 Enumeration
 - 6 Tags
 - 7 Content Reference
 - 8 CFX ID
 - 9 CFX Parent Attribute
 - CFX Child Reference
 - CFX CF Reference
 - CFX Image
 - CFX Tab Placeholder
 - CFX Datetime
 - CFX Tags



Properties	Access Control	Replication	Console	Build Info
1 fieldIcon				
2 fieldPropResourceType				
3 fieldProperties				
4 fieldResourceType				
5 fieldTitle				
6 jcr:primaryType				
7 listOrder				
8 renderType				
9 valueType				

ACCESSING CONTENT FRAGMENTS

CONTENT SERVICES *

- Utilize the Content Fragment and Content Fragment List components
- Can control exposed fields
- Needs a placeholder page

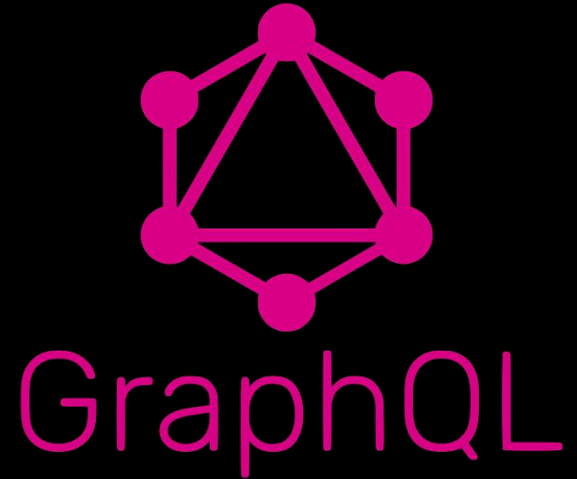
ASSETS API *

- Accesses Content Fragments directly without proxy pages or components
- Requires knowledge of the asset hierarchy
- Good for developer utilization and full CRUD functionality

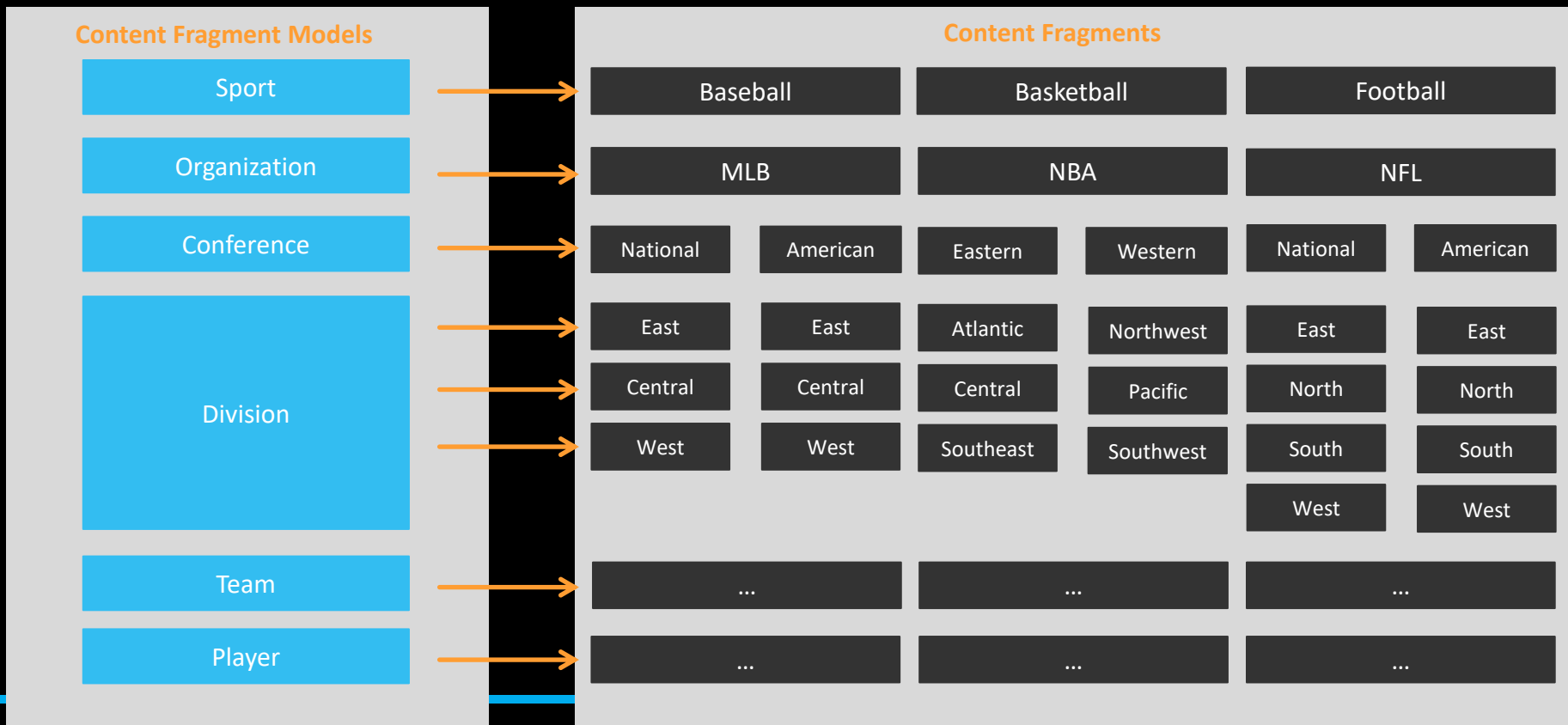
* Both are REST based

AEM CF EXTRAS GRAPHQL API

- Automatically generated schema
- Access exactly what you need, nothing more, nothing less
- Built on GraphQL Java library
- Filter results
- Immediate reflection of model updates
- Auto generated ID fields based on CF path
- No DAM hierarchy knowledge required by caller



DEMO DATA



DEMO

GITHUB PROJECT

<https://github.com/Bounteous-Inc/aem-cf-extras>

DOCS

<https://docs.adobe.com/content/help/en/experience-manager-learn/sites/content-fragments/content-fragments-delivery-feature-video-use.html>

<https://www.graphql-java.com>