

Deep Dive into AEM APIs



Tyler Maynard

AEM DEVELOPER

@TylersDesk www.tylermaynard.com



Overview



Polling importers

Content components

AEM workflows

Creating launchers

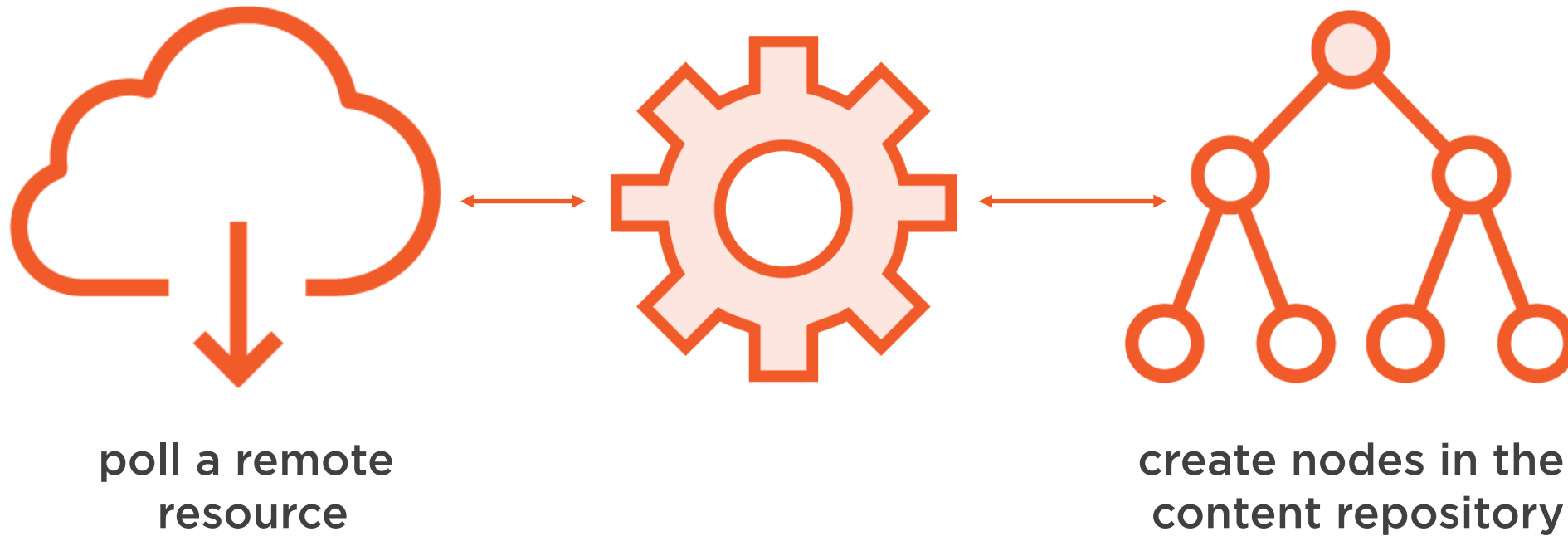
Creating pages and assets
programmatically



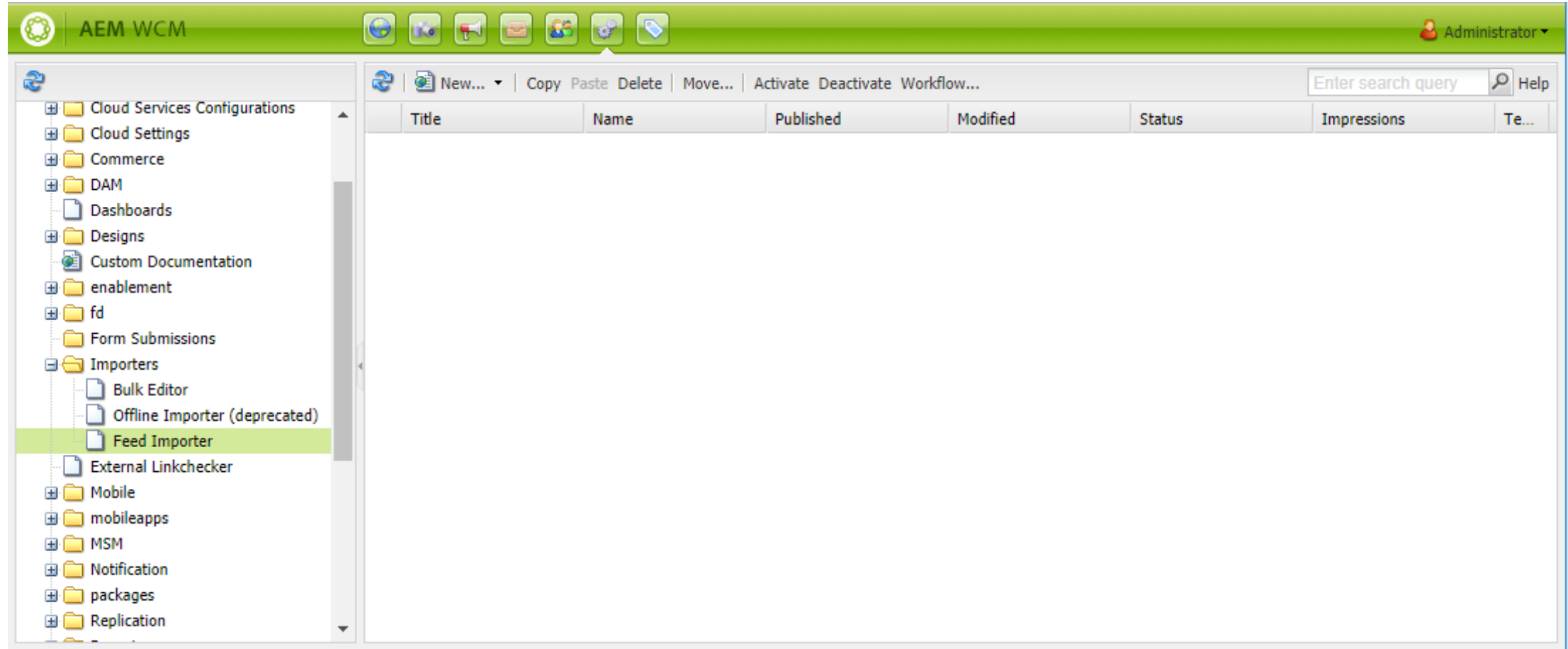
Polling Importers



Feed Importer



Feed Importer Inside of AEM



Create a Polling Importer



Demo



Create a polling importer

Configure polling node

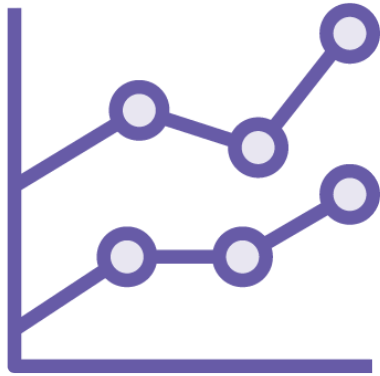
Verify lastTrade node was created



Content Components



StockPlex Component Requirements



**Return stock
information**



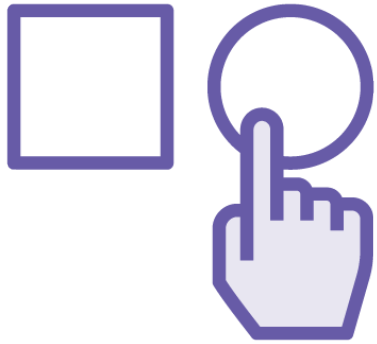
**Fits in with the
website look and feel**



**Allows author input
for stock of interest**



More StockPlex Component Requirements



Author to choose
what is displayed



Allows the user to
download stock
history



Dragged into a
paragraph system

Components and the Paragraph System

The screenshot displays a web editor interface. On the left, a 'Components' sidebar lists various elements: Columns, Hello World Component, Image, Text, Text and Image, and Title. Each component is represented by an icon and a label. The main editing area shows a preview of a page with a dark header containing 'ENGLISH', 'Edit', and 'Preview' buttons. The page content includes a green title 'SLING SERVLET INJECTED THIS TITLE', followed by a paragraph of Lorem Ipsum text. Below the text, a 'Hello World Component' is placed, which is a rectangular box with a blue border and a blue triangle pointing upwards. A label 'Start of 2 Columns' is visible next to the component. The page layout is divided into two columns, with the component spanning both.

Components

Filter

All

Columns
TrainingProject Com...

He Hello World Compo...
TrainingProject Com...

Image
TrainingProject Com...

Text
TrainingProject Com...

Text and Image
TrainingProject Com...

A Title
TrainingProject Com...

ENGLISH Edit Preview

SLING SERVLET INJECTED THIS TITLE

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He Hello World Compo...
TrainingProject Com...

Start of 2 Columns

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Demo



Observe `StockModel.jav`

Install the StockPlex component content package

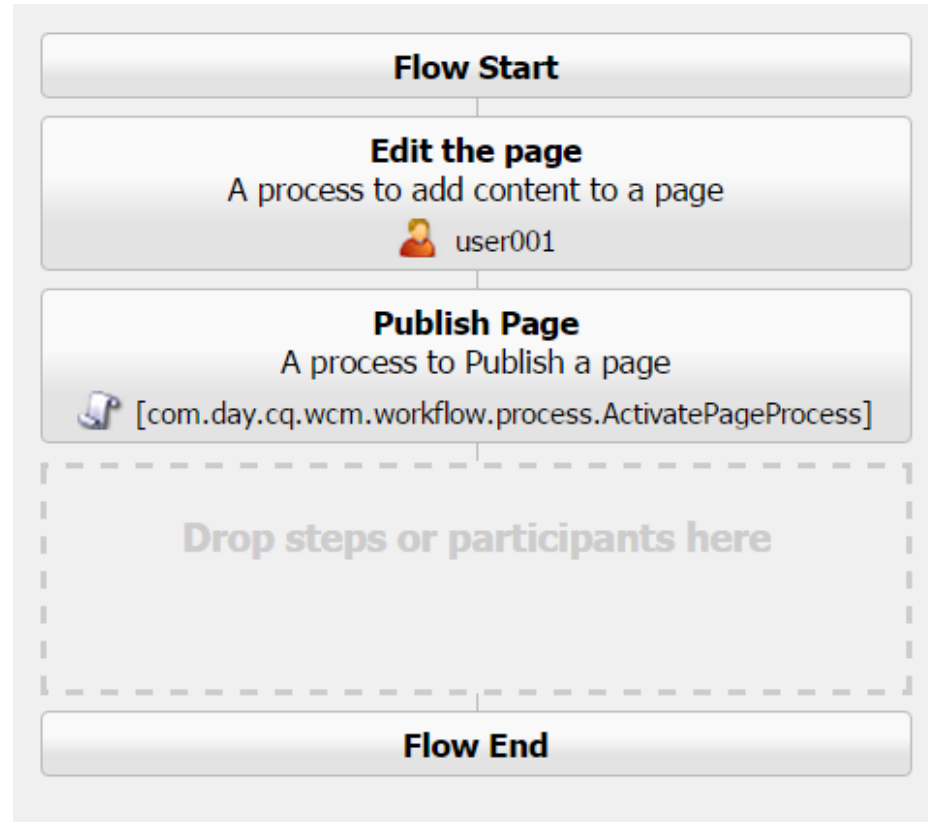
Enable StockPlex component and add it the page



AEM Workflows



Workflow Publish Page Example



Understanding the Workflow Objects

Model

Steps

Transition

WorkItem

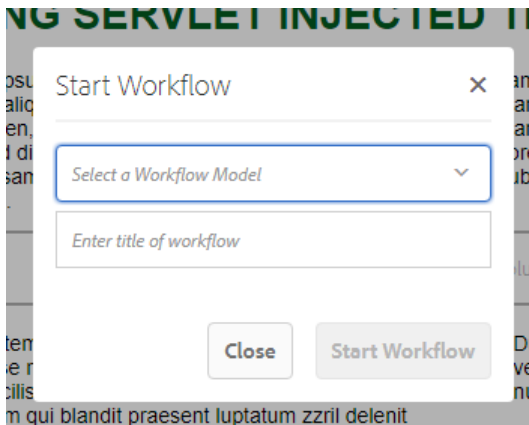
Payload

Lifecycle

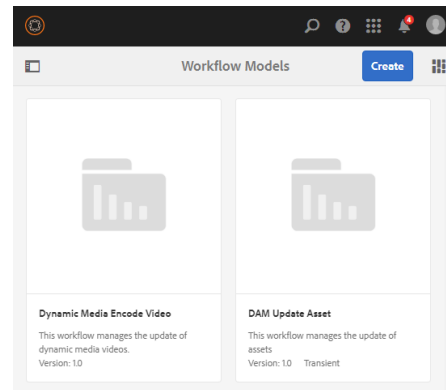
Inbox



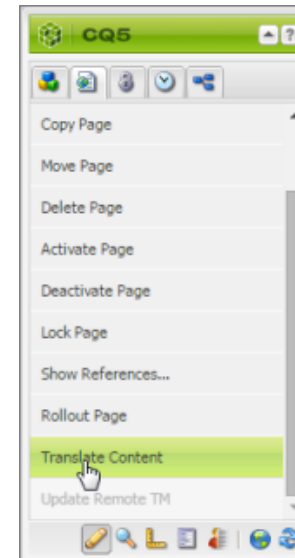
Executing an Existing Workflow



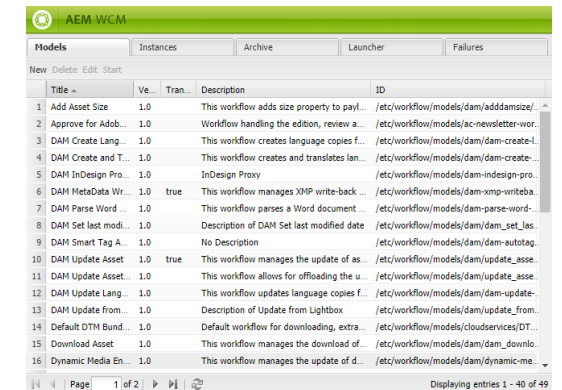
Context menu



Workflow console



Site Admin (classic UI)



Sidekick (classic UI)



Demo



Navigate to Tools > Workflow > Models

Select and start workflow

Provide payload information



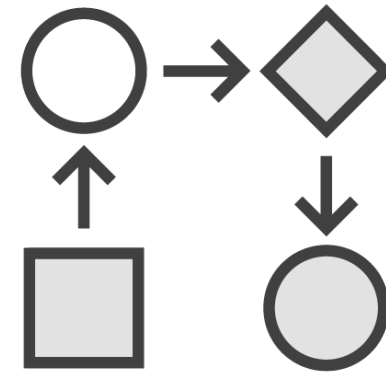
Workflow Models and Workflow Steps



Defining Workflow Models



Modify existing or create new



Flow start -> steps -> flow end



Understanding Workflow Steps

Common steps	Description
Participant step	Requires manual intervention by a person to advance the workflow.
Process step	Automatic actions that are executed by the system if specific conditions are met.



Participant Step



Assign to a user or a group of users



Notify participants of their required action



Timeouts and timeout handlers

Process Step

Workflow control processes

Basic processes

WCM processes

Versioning processes

DAM processes

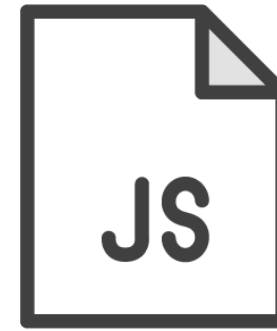
Collaboration processes



Developing Custom Steps



Java class bundles



ECMA scripts



Creating a Workflow

1. Open the Workflow Console, and create a new model.

2. Double-click the newly created model, and modify the steps.

3. Edit the properties of the steps.

4. Save the workflow.



Create a Custom Workflow Step



Demo



Create a custom process step

Add process to workflow

Execute workflow



Workflow Launchers



Workflow Console & Launcher Properties

Event type

Node type

Path

Workflow

Active

Run modes(s)



Publish Page Launcher Example

Event type:

`modified`

Node type:

`nt:unstructured`

Path:

`/content/Geometrixx`

Workflow:

`publishPage`

Active:

`enable`

Run mode:

`author`



Launchers vs JCR Observations/Sling Eventing

Workflow Launcher

Has a UI

Easy to start or stop

Workflow model can be changed dynamically

Involves more overhead, and is ideal to use if there are only moderate amounts of event expected

It is cluster-aware, and runs only on the cluster master

JCR Observation/Sling Eventing

Does not have a UI

Requires the use of Web Console to stop the listener component

Requires programmatic or configuration changes

Involves less overhead, and can handle more frequent events

Sling eventing is not cluster-aware



Monitoring Performance of Workflows

Workflow reporting interface —→ `/etc/reports/workflowreport.html`

- Details on number of workflows and its duration
- Links for various workflows, and a breakdown of its steps



Create Workflow Launcher



Demo



Create new StockAlert process

Create StockAlert Workflow

Create workflow launcher

Test workflow launcher



Creating Pages and Assets Programmatically



Creating Pages Dynamically

Automate data migration -> `com.day.cq.wcm.api.PageManager`



Creating Assets Dynamically

Assets -> `com.day.cq.dam.api.AssetManager`

Tags -> `com.day.cq.tagging.TagManager`



Identifying Cost Benefit

Manual migration (human entry)

Automated migration (using APIs)

Hybrid migration (combination of manual and automated)



Demo



Create PageCreator

Modify the CSRF filter

Create page for creating pages



Programmatically Create a Website



Demo



Create CSVPageCreator servlet

Create page to upload CSV

Test CSVPageCreator servlet



Summary



Polling importers

Content components

AEM workflows

Creating launchers

Creating pages and assets
programmatically

