



## ADOBE EXPERIENCE MANAGER

**ULADZIMIR LITVINCHUK**

"What's new in Adobe Experience Manager 6.5:  
tricks, killer features & fixes"

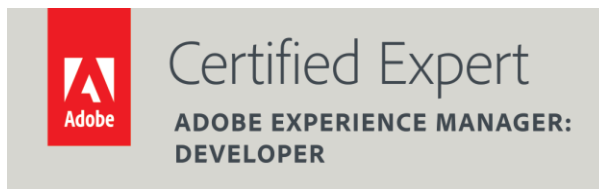
Certified Senior AEM Developer, Belarus

**23 july 7:00 pm; High Tech Park 1/5 Kuprevicha Str., Minsk**

# Speaker



- Senior AEM Developer
- Adobe Certified AEM 6 Developer
- AEM Trainer/Mentor
- AEM experience: 4+ years



# What is Adobe Experience Cloud



# What is Adobe Experience Manager

Adobe Experience Manager. A powerhouse combo for your CMS and DAM.

Adobe Experience Manager brings your content management system (CMS) and digital asset management (DAM) together — in one place. With its native connection to Adobe Creative Cloud, you will be the customer experience management pro by getting content to market faster and creating the personalized experiences your customers expect.



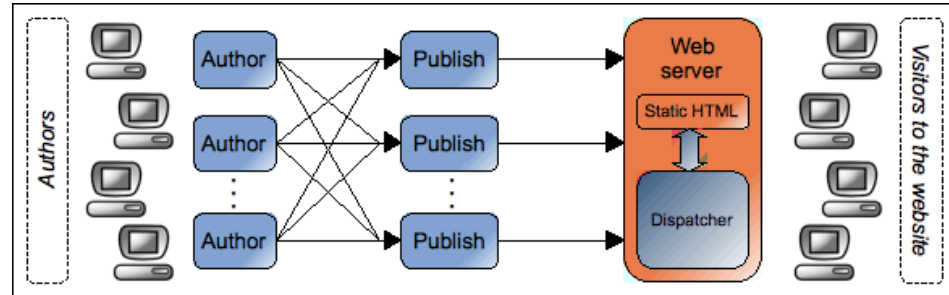
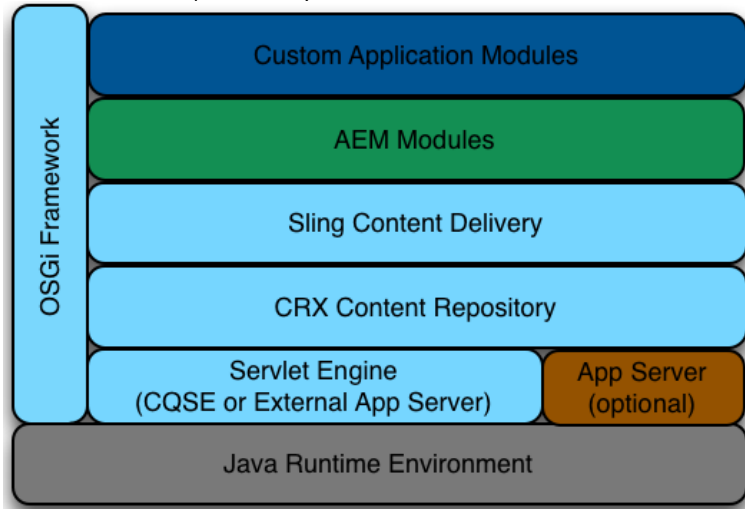
# Customers and scale of use



[https://www.adobe.com/customershowcase.html?filters=csProduct\\_252Fmc\\_252FexperienceManager&page=1](https://www.adobe.com/customershowcase.html?filters=csProduct_252Fmc_252FexperienceManager&page=1)

# AEM technologies stack

- **Apache Sling** – It is a framework of the web application, created for content-related applications. It uses Java Content Repository like CRX or Apache Jackrabbit for storing and managing content.
- **Apache Felix (OSGi)** – This technology allows the installation and loading of bundles during operation and it contains compiled Java scripts, code, and content that is required to be loaded into a repository. It is an open-source project that includes OSGi framework and provides standard services.
- **Java Content Repository** – It uses JSR-170 API for accessing the content repository



# AEM 6.5 Features

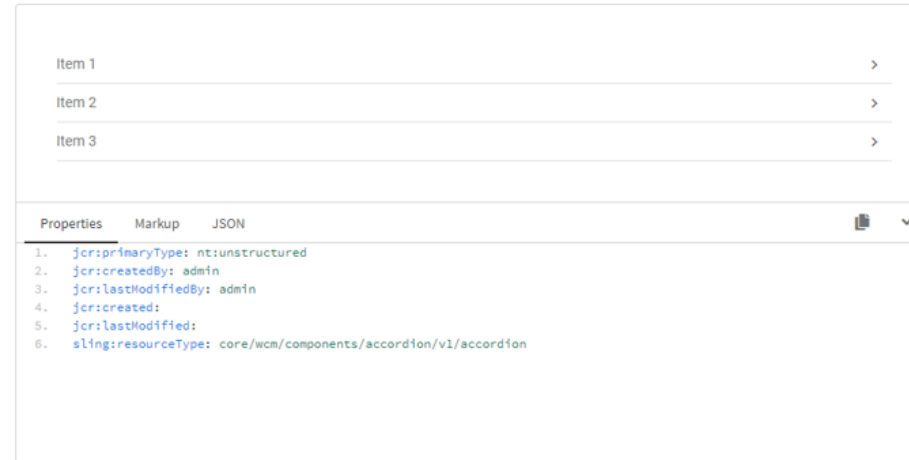
## AEM 6.5 Content Features

# Core components

- What's new?
- Accordion component
- A few releases later we have v2.5 available for the deployment list

## Sample Content

Accordion with three items with each item being a layout container and containing sample content.



Item 1 >

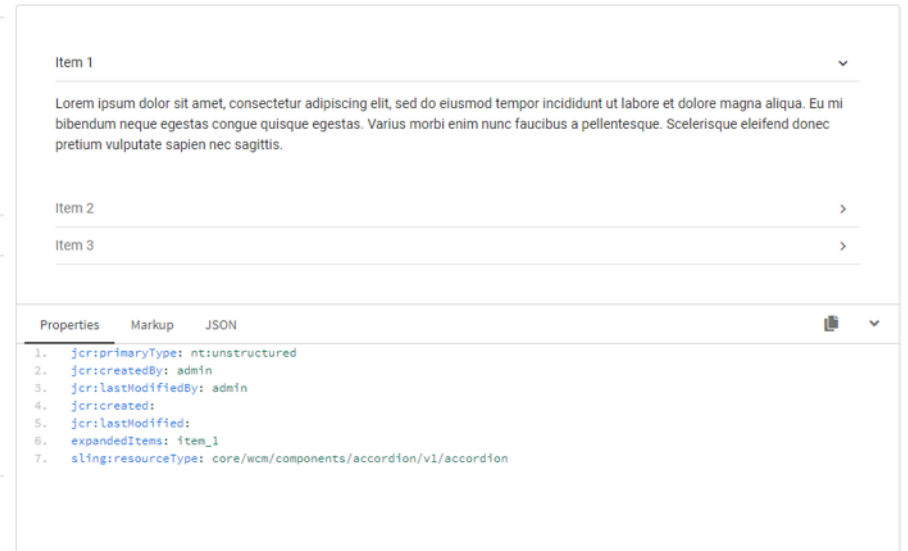
Item 2 >

Item 3 >

| Properties  | Markup | JSON |
|---|--------|------|
| 1. jcr:primaryType: nt:unstructured                               |        |      |
| 2. jcr:createdBy: admin   |        |      |
| 3. jcr:lastModifiedBy: admin                                      |        |      |
| 4. jcr:created:   |        |      |
| 5. jcr:lastModified:  |        |      |
| 6. sling:resourceType: core/wcm/components/accordion/v1/accordion |        |      |

## Expanded Item

Accordion with three items with the item expanded by default being the first item.



Item 1 >

Item 2 >

Item 3 >

| Properties  | Markup | JSON |
|---|--------|------|
| 1. jcr:primaryType: nt:unstructured                               |        |      |
| 2. jcr:createdBy: admin   |        |      |
| 3. jcr:lastModifiedBy: admin                                      |        |      |
| 4. jcr:created:   |        |      |
| 5. jcr:lastModified:  |        |      |
| 6. expandedItems: item_1  |        |      |
| 7. sling:resourceType: core/wcm/components/accordion/v1/accordion |        |      |



# Core components

## Container

Can be used to group together other components and apply a common layout or style. Custom background image and color can also be applied.



Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Eu mi bibendum neque egestas congue quisque egestas. Varius morbi enim nunc faucibus a pellentesque. Scelerisque eleifend donec pretium vulputate sapien nec sagittis.



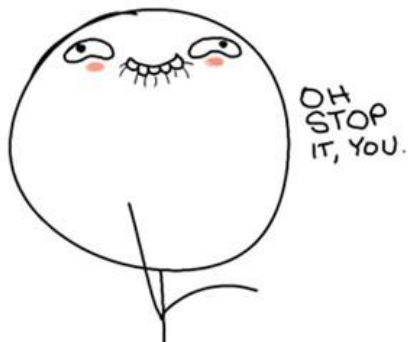
## Lorem Ipsum

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Eu mi bibendum neque egestas congue quisque egestas. Varius morbi enim nunc faucibus a pellentesque. Scelerisque eleifend donec pretium vulputate sapien nec sagittis.

# Core components

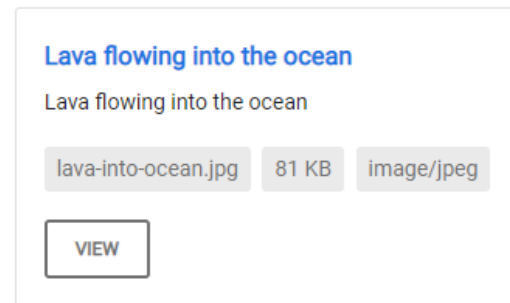
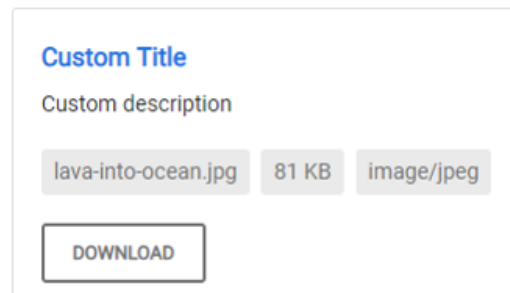
## Button

- Linkable to content pages, external URLs or page anchors;
- Allows an icon identifier to be configured for rendering an icon;
- Style System support.



## Download

Download component that displays a downloadable asset on the page.

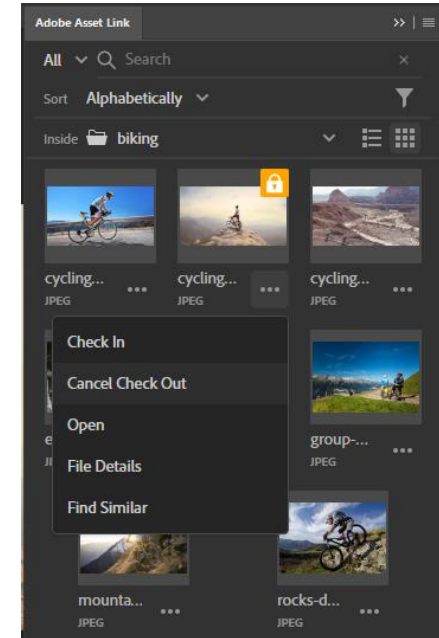
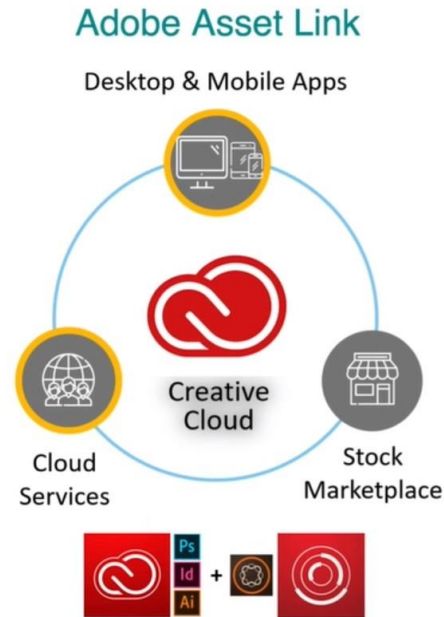


# Asset link

## Connect. Create. Collaborate.

Asset Link allows teams to design, revise, review and approve any asset (housed in Experience Manager Assets) directly in Photoshop, Illustrator, or InDesign.

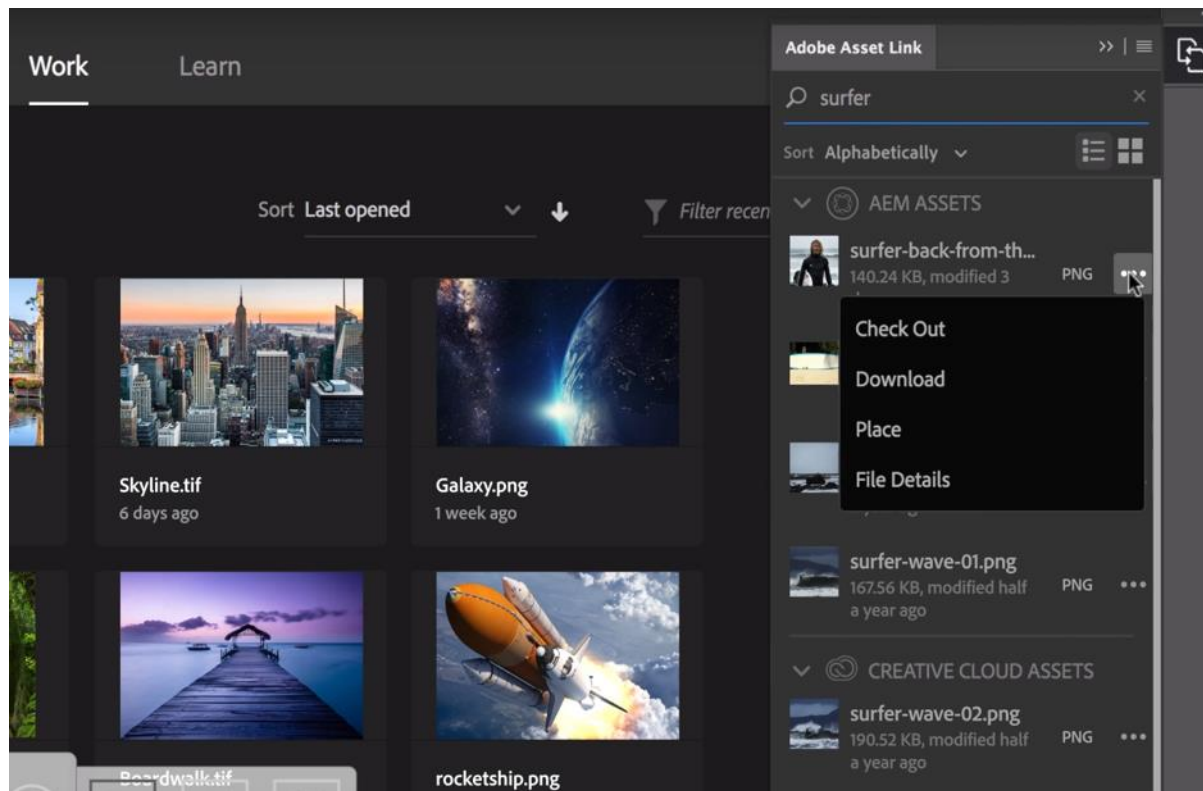
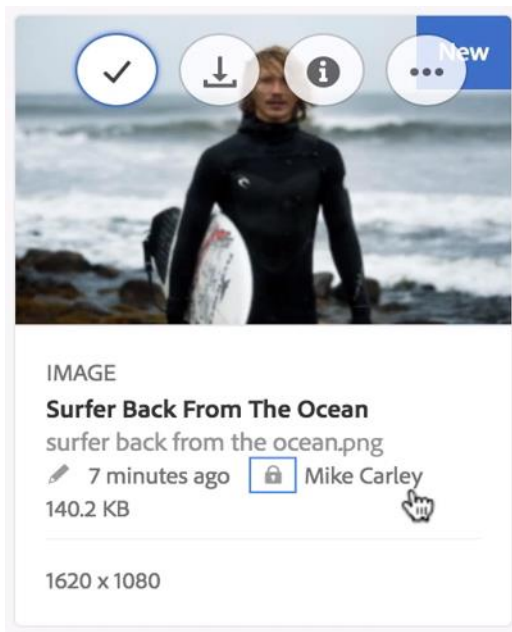
- Searching across AEM Assets and Creative Cloud Assets;
- Checking out/in content stored in AEM Assets to prevent duplicate work by team members and to maintain a single source of truth;
- Keeping work-in-progress assets and final production assets in separate locations;
- Enabling new assets to be uploaded to AEM Assets;
- Easily access through Single Sign On (SSO) with Creative Cloud account credentials.



# Asset link

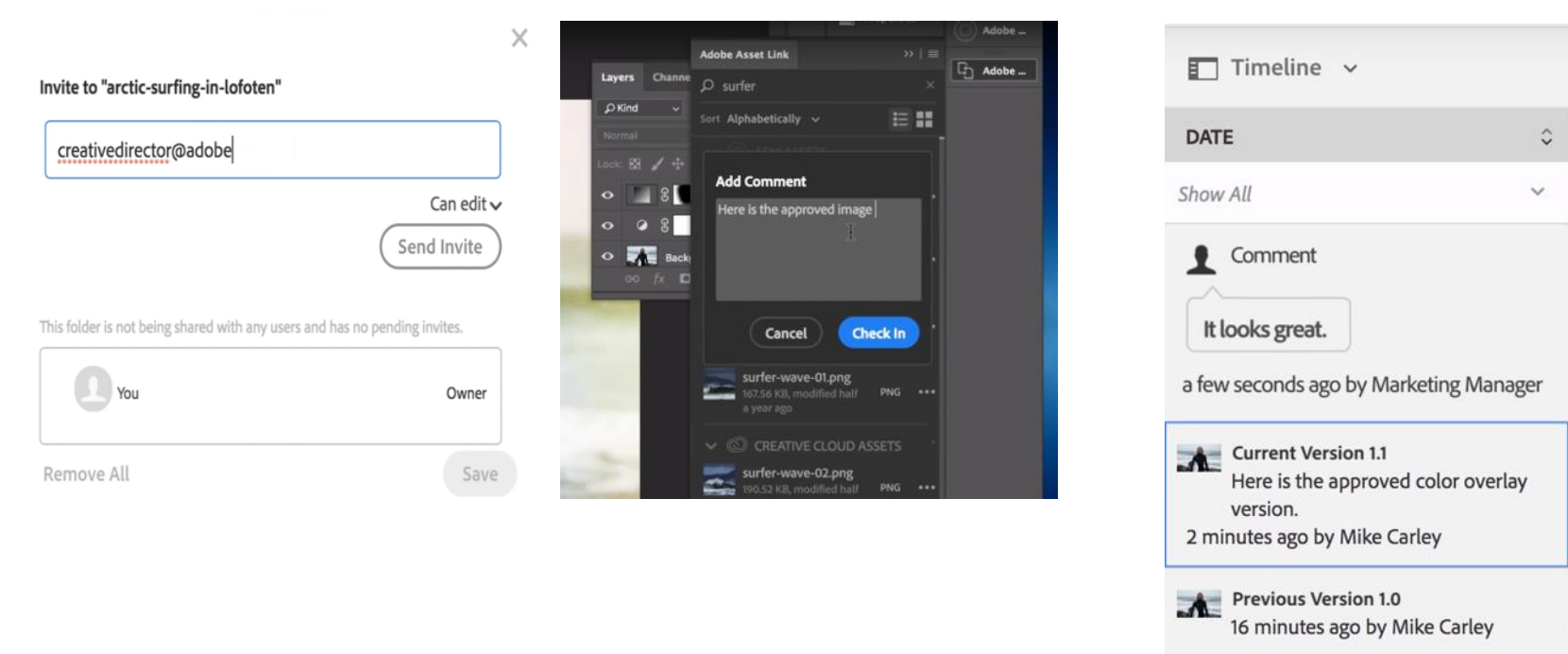
How to start:

1. Create user group
2. Configure AEM Assets
3. Install Adobe Asset Link
4. Use Adobe Asset Link



# Asset link

Teamwork, fast communication, clear updates and changes

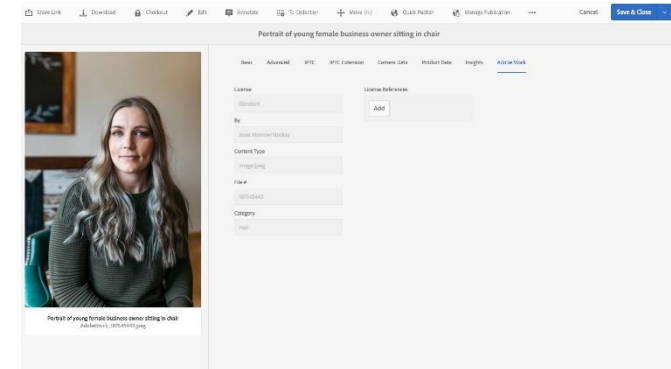
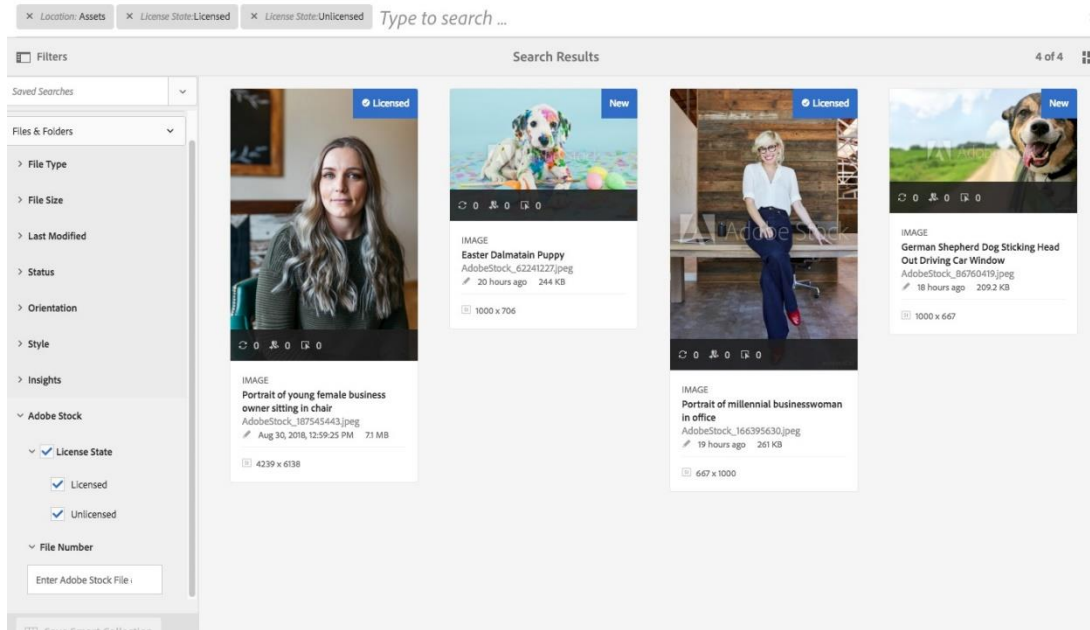


# Adobe Stock integration



## Adobe Stock

Use the powerful capabilities of Adobe Stock right in AEM



# Adobe Sensei and the Company

Adobe Sensei is AI and machine learning for customer experiences.

Today, Adobe Sensei powers dozens of features across Adobe products. And Adobe have many more innovations on the way.



## Creative Intelligence

Adobe Sensei powers intelligent features in [Adobe Creative Cloud](#), enabling creatives to work faster, with fewer distractions and a greater breadth of creative expression.



## Experience Intelligence

Leveraging machine learning and artificial intelligence, Adobe Sensei allows marketers to discover meaning in data and create more effective experiences using [Adobe Experience Cloud](#).



## Content Intelligence

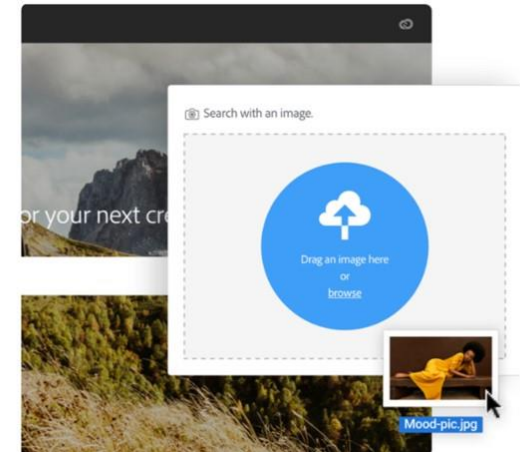
Adobe's deep experience in creating, publishing, transforming, and managing content and documents allows Adobe Sensei to understand the structure and meaning of documents. [Adobe Document Cloud](#) features makes this understanding available to everyone.



# Adobe Sensei and the Company

## Visual Search

Discover even more content by selecting an asset and leveraging machine learning and pixel recognition, powered by Adobe Sensei, to find visually similar assets.





# Adobe Sensei and the Company

## Smart Crop

Eliminate hours of tedious editing work with our smart crop tool, which automatically detects and crops the focal point in any image or video.

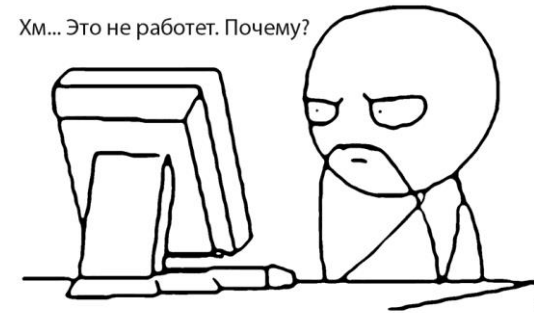


## New Integrations

AEM 6.5 features new integrations with the Adobe Experience Platform and Magento Commerce. Of course, for these integrations to work, you will need to license and configure the solutions.



# Development Stuff



# Java 11 and 2 new archetypes

- New support for the Oracle JDK 11 "Long Term Support" releases (LTS)  
Oracle JDK Java 8 releases are also supported (LTS)  
Java 9, Java 10 and future non - LTS releases are not supported
- Java Content Repository: Apache Jackrabbit Oak 1.10.2.
- The Quickstart uses Eclipse Jetty 9.4.15 as servlet engine
- Added OSGi Promises and Converter utility libraries
- DarchetypeVersion=20-SNAPSHOT.



```
<!-- Testing -->
<dependency>
  <groupId>org.junit</groupId>
  <artifactId>junit-bom</artifactId>
  <version>5.4.1</version>
  <type>pom</type>
  <scope>import</scope>
</dependency>
```

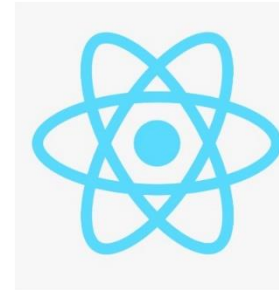
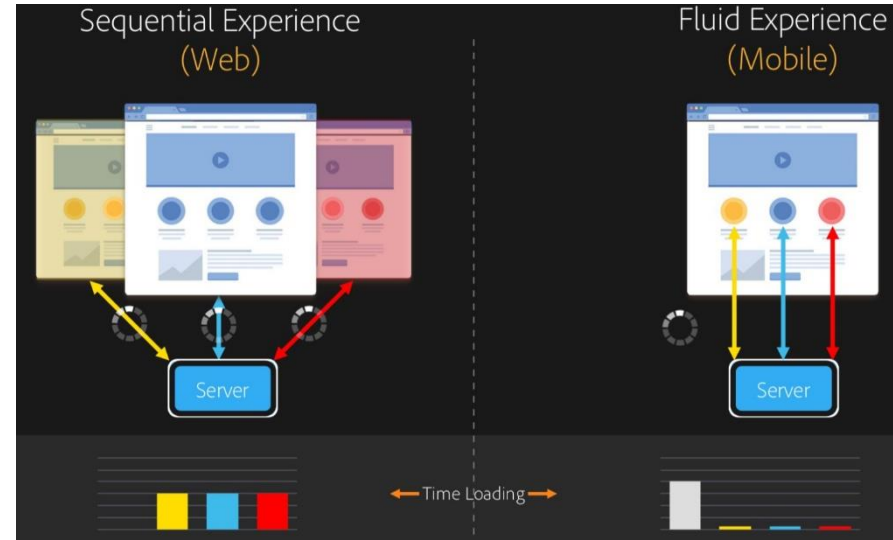
# SPA Editor

AEM's SPA Editor provides authors the ability to edit content for a Single Page Application or SPA.

Developers using the framework create a SPA and then map areas of the SPA to AEM components, allowing authors to use familiar AEM Sites editing tools.

## What do we need:

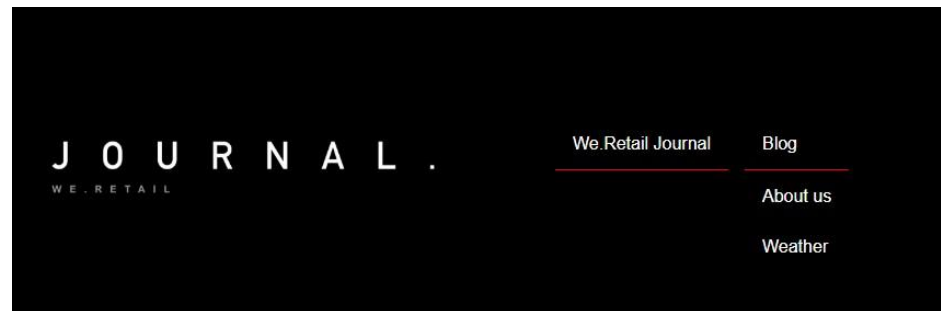
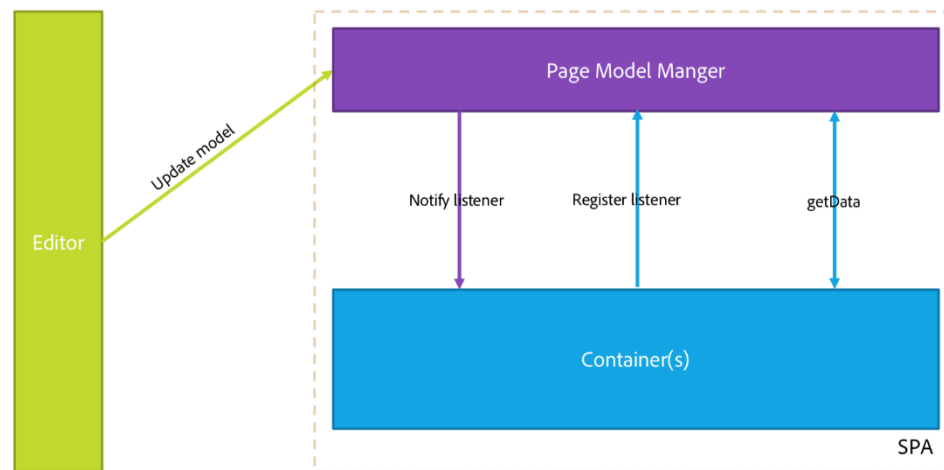
- Adobe experience Manager 6.5 and Adobe experience Manager 6.4 + service pack 2;
- Java 1.8;
- Apache Maven-3.3.1+;
- Node.js-8.11.1+ and npm 5.6.0+ (npm is installed with node.js).



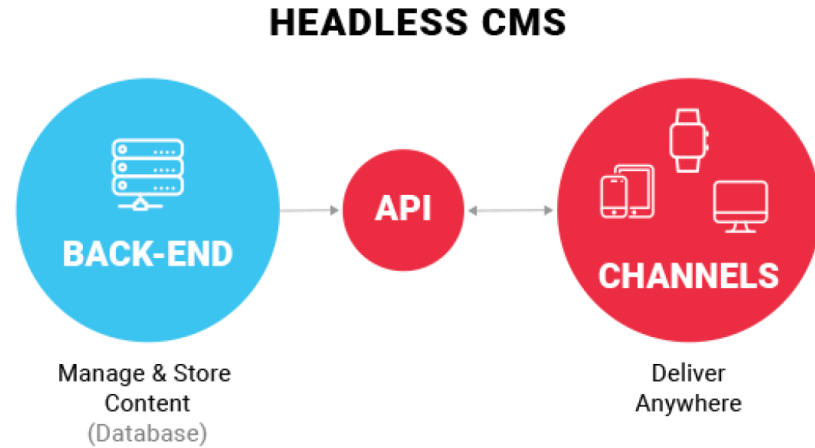
# SPA Editor

- The communication between the page editor and the SPA is made using JSON instead of HTML.
- The page editor provides the latest version of the page model to the SPA via the iframe and messaging API.
- The page model manager notifies the editor it is ready for edition and passes the page model as a JSON structure.
- The editor doesn't alter or even access the DOM structure of the page being authored rather it provides the latest page model.

<https://github.com/adobe/aem-sample-we-retail-journal/releases>



# Headless Content Delivery



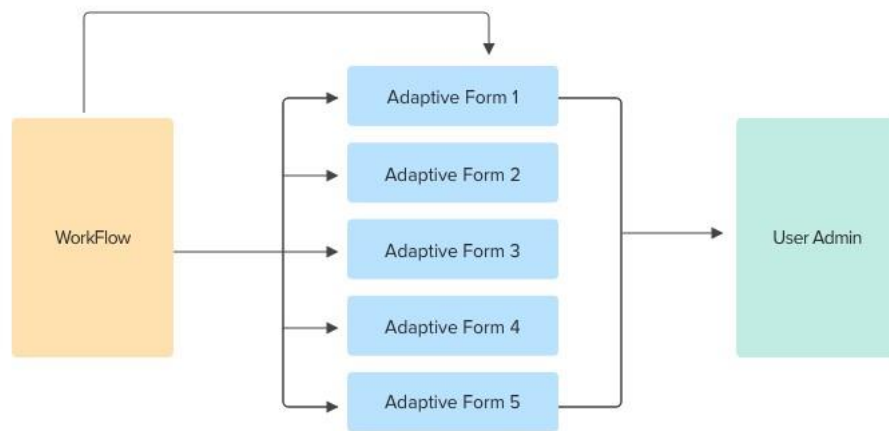
## Headless CMS in AEM

The headless CMS extension for AEM was introduced with version 6.3 and has been continuously improved since then, it mainly consists of the following components:

**Content Services:** Provides the functionality to expose user-defined content through a HTTP API in JSON format. This allows to deliver data to 3rd party clients other than AEM.

**Content Fragments:** Allows the user to insert/edit content as structured data entities. The schema of each content fragment is defined by a corresponding **Content Fragment Model**.

# AEM Forms



- Adobe Sensei powers you to automatically convert all your legacy PDF forms and traditional input fields to digital, mobile-responsive, adaptive forms;
- Reusing Workflow Across Multiple Adaptive Forms.





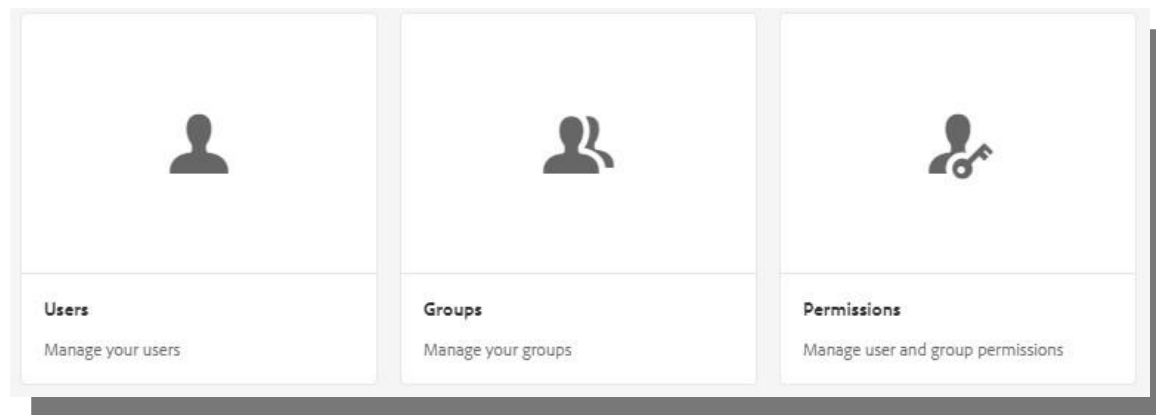
# New permission management tools

Before release 6.5

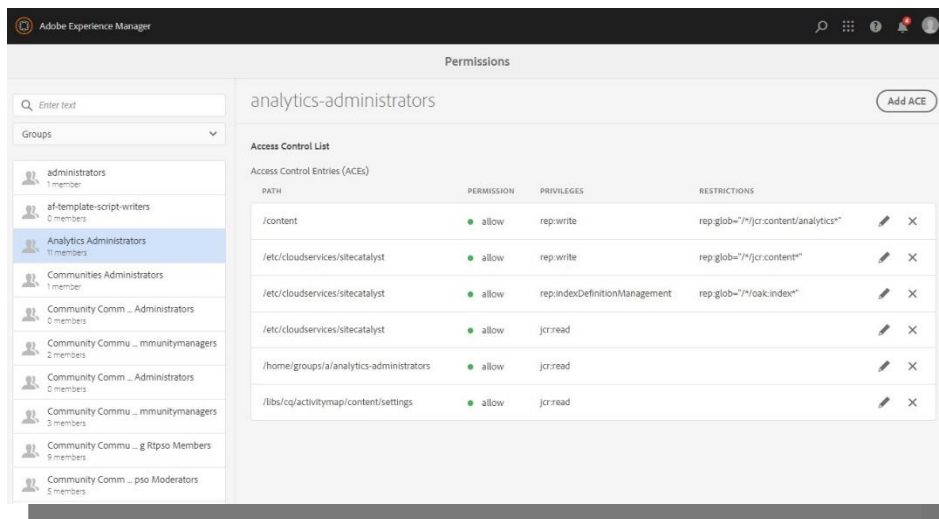
The screenshot displays the AEM Security console. On the left, a list of users is shown, including 'account-manager', 'activity-service', 'activitypursesrv', 'admin', 'administrators', 'af-template-script-writers', 'analytics-administrators', 'analytics-content-updater-s...', 'analyticsservice', 'anonymous', 'assetdownloadservice', 'assetlinkshareservice', 'assetusagetrackeruser', 'async-jobs-service', 'audit-service', 'authentication-service', 'author-publish-screens-ser...', 'bulk-offline-update-screens...', 'campaign-cloudservice', 'campaign-reader', 'campaign-remote', 'canvaspage-activate-service', and 'canvaspage-delete-service'. The 'account-manager' user is selected, and the 'Permissions' tab is active. The right pane shows a table of permissions for the 'account-manager' user across various paths. The table has columns for Path, Read, Modify, Create, Delete, Read ACL, Edit ACL, and Replicate. The paths listed include 'apps', 'bin', 'conf', 'content', 'campaigns', 'catalogs', 'communities', 'community', 'community-components', 'core-components-examples', 'cq:tags', 'dam', 'experience-fragments', 'forms', 'launches', 'projects', 'screens', 'sites', 'usergenerated', 'we-retail', and 'wknd-events'. The 'cq:tags' and 'experience-fragments' paths have 'Read' and 'Modify' permissions checked.

| Path                     | Read | Modify | Create | Delete | Read ACL | Edit ACL | Replicate |
|--------------------------|------|--------|--------|--------|----------|----------|-----------|
| apps                     | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| bin                      | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| conf                     | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| content                  | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| campaigns                | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| catalogs                 | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| communities              | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| community                | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| community-components     | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| core-components-examples | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| cq:tags                  | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| dam                      | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| experience-fragments     | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| forms                    | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| launches                 | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| projects                 | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| screens                  | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| sites                    | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| usergenerated            | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| we-retail                | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |
| wknd-events              | ✓    | ✓      | ✓      | ✓      | ✓        | ✓        | ✓         |

# New permission management tools

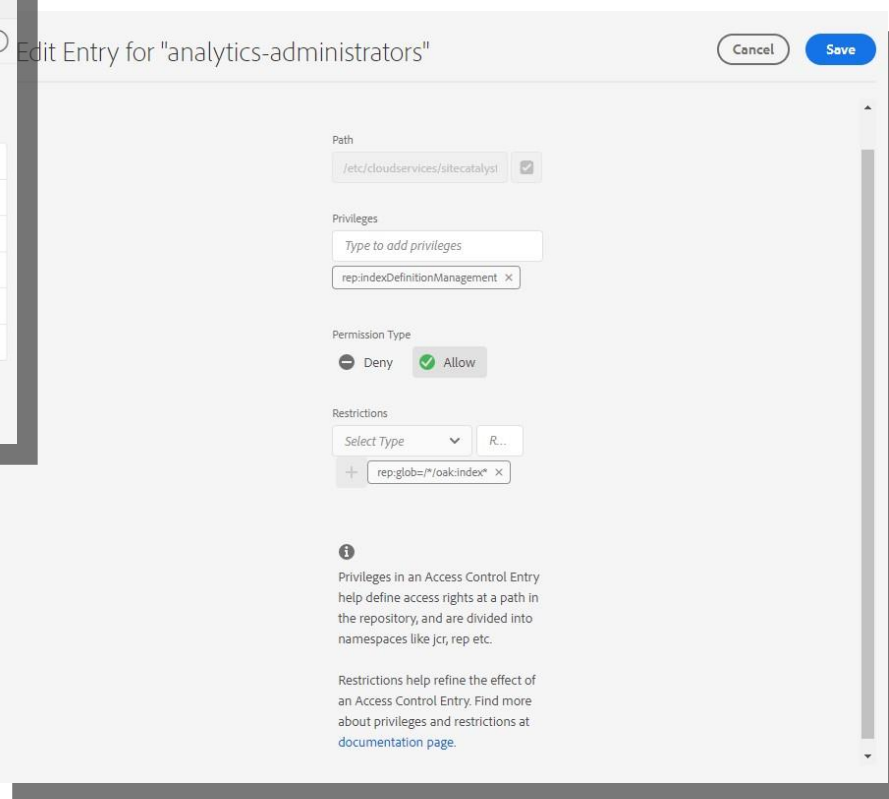


# New permission management tools: Permissions



The screenshot shows the Adobe Experience Manager interface. On the left is a sidebar with a search bar and a list of groups. The 'Analytics Administrators' group is selected. The main panel is titled 'Permissions' and shows the 'analytics-administrators' group. Below this is the 'Access Control List' (ACL) table.

| PATH                                    | PERMISSION | PRIVILEGES                    | RESTRICTIONS                        |
|---|------------|-------------------------------|-------------------------------------|
| /content                                | allow      | rep:write                     | rep:glob="/*/jcr:content/analytics" |
| /etc/cloudservices/sitecatalyst         | allow      | rep:write                     | rep:glob="/*/jcr:content"           |
| /etc/cloudservices/sitecatalyst         | allow      | rep:indexDefinitionManagement | rep:glob="/*/oak:index"             |
| /etc/cloudservices/sitecatalyst         | allow      | jcr:read                      |                                     |
| /home/groups/a/analytics-administrators | allow      | jcr:read                      |                                     |
| /libs/cq/activitymap/content/settings   | allow      | jcr:read                      |                                     |



The screenshot shows the 'Edit Entry for "analytics-administrators"' dialog box. It has a 'Cancel' button and a 'Save' button. The dialog contains the following fields:

- Path:** /etc/cloudservices/sitecatalyst
- Privileges:** rep:indexDefinitionManagement
- Permission Type:** Allow (selected)
- Restrictions:** rep:glob="/\*/oak:index"

Below the fields is a help section with an information icon and text:

Privileges in an Access Control Entry help define access rights at a path in the repository, and are divided into namespaces like jcr, rep etc.








Restrictions help refine the effect of an Access Control Entry. Find more about privileges and restrictions at [documentation page](#).

# New permission management tools: Users & Groups

Adobe Experience Manager


### User Management

☒ Select All

| Name  | Login Name                        | Status  | Job Title | Published     |
|---|-----------------------------------|---------|-----------|---------------|
|  account-manager                   | account-manager                   | Enabled | N/A       | Not Published |
|  activity-service                  | activity-service                  | Enabled | N/A       | Not Published |
|  activitypursesrv                  | activitypursesrv                  | Enabled | N/A       | Not Published |
|  Administrator                     | admin                             | Enabled | N/A       | Not Published |
|  analytics-content-updater-service | analytics-content-updater-service | Enabled | N/A       | Not Published |
|  analyticsservice                  | analyticsservice                  | Enabled | N/A       | Not Published |
|  anonymous                         | anonymous                         | Enabled | N/A       | Not Published |

### Edit User Settings For Carlene Avery

Details Groups KeyStore



New Photo

#### Account settings

Password Account Status  
[Change Password](#) ☒

#### Details

ID

Email

Title

First Name

Last Name

Gender

Phone Number

Job Title

About

Street

City

Postal Code

Country/Region

# What we lost

## Removed Features

| Area         | Feature  | Replacement                                 |
|--------------|--|---|
| Integrations | ExactTarget integration has been removed from the default distribution (Quickstart) and is now an extra package to install from PackageShare.          | Feature is still available.                 |
| Integrations | Salesforce Force API integration has been removed from the default distribution (Quickstart) and is now an extra package to install from PackageShare. | Feature is still available.                 |
| Forms        | Support for Adobe Central Migration Bridge service has been removed as Adobe Central product is no longer supported.                                   | No replacement                              |
| Forms        | com.adobe.fd.df.fdinternal.model.ConfigurationInstance   | No replacement                              |
| Forms        | com.adobe.fd.ccm.channels.print.fdinternal.api.service.PrintDataTransformer  | No replacement                              |
| Developers   | Firebug Lite has been removed from the default distribution (Quickstart)   | Use the browser built-in developer consoles |
| Developers   | Remove customJavaScriptPath support in HTML Client Library Manager.  | No replacement                              |
| Assets       | The Assets Offloading feature has been removed in AEM 6.5  | No replacement                              |



# Deprecated Features

- The integration with DTM (Dynamic Tag Manager);
- Using the mbox.js based integration with Adobe Target in AEM;
- Adobe does not plan to make further enhancements to most of the Foundation Components stored in /libs/foundation/components;
- Design Importer Components /libs/wcm/designimporter/components;
- Granite Offloading Framework;
- Hobbes.js, jQuery UI client library, jQuery Animation client library, Handlebars client library, Lawnchair client library, Granite.Sling.js client library;
- Classic UI Dialog Editor in CRXDE lite.

# Conclusion

1. Rapid delivery of the personalized brand experience;
2. Variability and flexibility;
3. Personalization of content and the final product;
4. Provide complete solutions for business.





ADOBE  
COMMUNITY

Question & Answers

[facebook.com/groups/AdobeBelarus/](https://facebook.com/groups/AdobeBelarus/)

[adobe.com.by](https://adobe.com.by)