APPLICATION DESIGN DOCUMENT

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INM

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REVISION HISTORY

Date	Author	Summary	Version
January 24th, 2016	Daniel Obadia	Initial creation of this document	0.0.1
January 25th, 2016	Daniel Obadia	Integrated Jorge Fernandez's back-end documentation	1.0
January 29th, 2016	Daniel Obadia	Added selection type OSGI configuration and server error handling	1.0.1

SCOPE OF THE DOCUMENT

This document illustrates the solution design for FADEL's AEM Asset Rights Clearance Integration. At a high level, the implementation of the solution consists of the following:

- Inventory of components with customization of AEM
- Selection of technologies and structure for front-end development
- OSGI bundle with a SlingServlet class for POST request processing and communication with the FADEL's ARC service
- Custom OSGI properties for the RESTful configuration of the AEM-ARC communication process

ARCHITECTURAL PLATFORM DECISIONS

BACK-END /OSGI

WHY AN OSGI BUNDLE WITH A SLING SERVLET FOR THE POST REQUEST PROCESSING?

In order to simplify the interaction with the FADEL-ARC RESTful web service within the AEM framework, we need a servlet registered in this environment that takes care of these tasks.

FADEL SERVLET

The servlet used by the "Asset Rights Clearance" dialog is accessed by a POST action. The servlet exposes a POST at the address "/bin/assetClearance" URL that needs to be called using payload data as follows:

{"uri":"clearanceWS/assetClearance",

"data":{"assets":{},"rights":{"selected":{"20":{"2182":{}},"30":{"2169":{}}},"partial ":{"20":{},"30":{}},"all":{"20":"false","30":"false"}},"inDateFrom":1453870800000, "outDateFrom":1454130000000,"externalAssets":{"selected":{"45405694249":{ "externalIdentifier":"4540569424","name":"athlete+4.jpg"}},"all":"false"},"rightT ypeLst":[{"lookupType":"FPI_RIGHT_DEFINITION_TYPES","fieldOrder":10,"looku pCode":"20","displayName":"Format"},{"lookupType":"FPI_RIGHT_DEFINITION_ TYPES","fieldOrder":20,"lookupCode":"30","displayName":"Territory"}]},

"method":"POST",

"contentType":"application/json"}

PAYLOAD CONTENT DESCRIPTION

URI

The uri contains the specific url to call for this particular request, it starts after the "/ipmSuite5/ws/V1/" string.

For Example:

Usually the ARC service URL has the following format:

http://demo.fadel.com:8082 /ipmSuite5/ws/V1/clearanceWS/assetClearance

The red part usually changes from one client to another (AEM-ARC configuration).

The green part is it's constant.

The blue segment (uri) changes from one call to another (Ex. For a thumbnail request the URL could be clearanceWS/assetClearance/assetThumbnail/4733).

Data

The JSON object request in the ARC standard format for the FADEL - RESTful web service.

Method

The method to use for underlying ARC communications.

Ex. For a Thumbnail request we use a GET and for an assetClearance request we use a POST.

contentType

Is the content type expected for the response (usually "application/json").

FADEL servlet configuration & integration

In order to avoid hard coding some configuration parameters that may change for various reasons or vary depending on the environment, AEM allows the use of configuration parameters for bundles.

HOW TO UPDATE THE CONFIGURATIONS NEEDED BY FADELSERVLET BUNDLE?

OSGi Configuration with the Web Console

The Web console in AEM provides a standardized interface for configuring the bundles. The Configuration tab is used for configuring the OSGi bundles, and is therefore the underlying mechanism for configuring AEM system parameters.

Any changes made, are immediately applied to the relevant OSGi configuration, no restart is required. They can also be located for saving in packages for re-use in further installations.
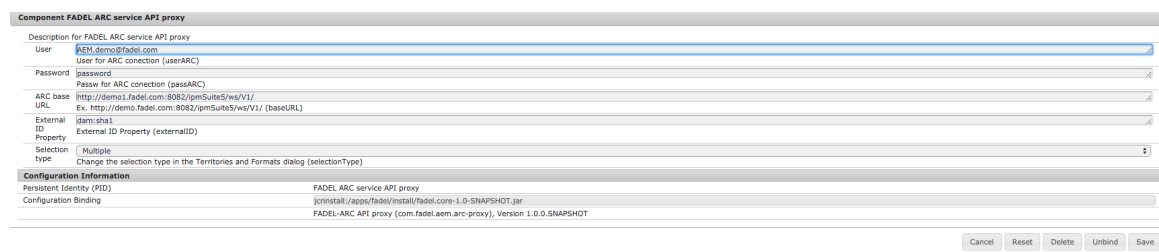
Basically, you can navigate to the following URL in your AEM instance:

http://localhost:4502/system/console/configMgr

Next, find the com.aem.fadel.core.servlets.FadelServlet configuration

Then you just need to open the configuration window (clicking on the pencil icon) and you should see the following configuration dialog:

Now you should enter your configuration parameters (mostly provided by your FADEL-ARC consultant).

The User and Password fields are used for authentication purposes during the requests made to the ARC's web service (these are basics parameters from your FADEL-ARC client workspace).

The ARC base URL will be the starting segment from your FADEL-ARC RESTful web service,

For Example: if your FADEL-ARC web service URL is:

http://demo.fadel.com:8082/ipmSuite5/ws/V1/ipmSuite5/ws/V1/clearanceWS/ assetClearance

Your Base URL config will be the sum of the red part (usually different from one client to another) and the blue part (usually constant).

Important: for the Base URL field you have to include the "/" located after the "V1" segment.

The External ID Property is the only AEM custom parameter. The goal of this parameter is to provide the name of the property (Unique ID associated with an asset stored within AEM) that will be used as the External Identifier in the FADEL-ARC databases.

Important: the External ID Property content has to be a property in the *{assetpath}/jcr:content/metadata* node of the AEM asset. The OSGI bundle needs to be fully configured in order for the Asset Rights Clearance dialog to function.

The Selection Type field allows you to change the selection type from Multiple to Single for the Territories and Formats fields in the Asset Clearance Dialog.

All the components were built using internal AEM components and libraries and the following apache tools:

- Apache Commons Codec (commons-codec) version 1.10
- Apache Commons IO (commons-io) version 1.3.2

Both are under the Apache License, Version 2.0 (http://www.apache.org/licenses/LICENSE-2.0).

FRONT-END DESIGN

We call front-end the interface layer with which FADEL's authors interact with the author interface.

The front-end is realized by the AEM components rendering HTML, CSS and JS based on predefined templates and components.

MAIN TECHNOLOGIES

The front-end consists of HTML, JavaScript and CSS files that are generated by the backend and interpreted by author's web browsers.

Twitter Bootstrap, Angular JS and jQuery have been used for this project's integration with AEM. These technologies are used to communicate with the backend API (Angular JS) and provide styling and small front-end logic (Bootstrap & jQuery). These technologies are included via a CDN as per the code INM was provided and are all under MIT licenses.

FADEL'S REPOSITORY STRUCTURE

The repository has several specific areas:

- **/apps/dam/gui/components**- AEM Out-of-the-box components customizations (such as copyrightcheck, which contains JSP files for dialog creation and CSS/JS files for styling and handling).

- **/apps/dam/gui/content**- Adds FADEL's custom Asset Right Clearance dialog to the DAM authoring interface

- **/etc/designs/fadel**- Contains FADEL's logo and provides a structure for future JavaScript library inclusion throughout FADEL's project such as JQuery or Bootstrap.

- **/libs/dam/gui/components/admin/childasset**- AEM Out-of-the-box component modified (in /apps) to add FADEL's activator class for AEM's Access Rights Management (ACL). This provides security to the added menu item; only users with Edit rights can see and use it.

COMPONENTS

AEM offers the possibility to create components to facilitate the creation of pages for authors depending on what section of the site they are working on.

COMPONENTS LIST

Components are puzzle pieces used to build page templates. In this project, components have been modified and used to build FADEL's Asset Rights Clearance Integration.

COPYRIGHT CHECK

The Copyright Check component integrates all the necessary files for the Asset Rights Clearance dialog to function. These include JS/JSP/CSS.

- Path : /apps/dam/gui/components/admin/copyrightcheck
- Description:
    - o Allows authors to select items within the DAM and open an Asset Rights Clearance dialog
    - o The dialog displays a form with the selected asset IDs and Filenames, authors can choose a Format, Territory and dates to check for Asset Clearance
    - o We've added some error handling:
        - If the date "To" is prior to "From", show an error
        - If the form is not entirely filled, show an error
    - o By clicking on "Get Clearance" the clearance result will be displayed to the author
    - o Author's may choose to get more details via the result's popover link
    - o Authors can close the dialog and select other assets to check

- Screenshots: