

Integrate cognitive services with ADF framework

Detect sentiment topics, and metadata from Images and text

Eugenio Romano

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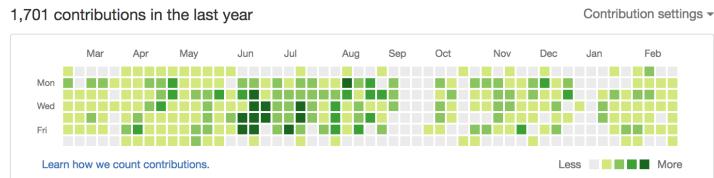
Senior Software Engineer Alfresco

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Open-source contributor
(Activiti, ADF, Alfresco-js-api, etc.)



HAPPY TO HELP

Gitter Channel

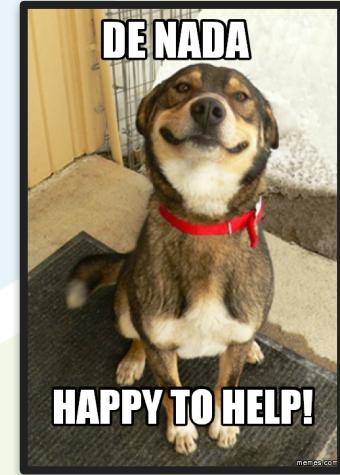


<https://gitter.im/Alfresco/alfresco-ng2-components>

Alfresco community website



<https://community.alfresco.com/community/application-development-framework>



ADF 1.4 IS HERE

Friday 27 April we are going to release:

ADF 1.4

ALFRESCO-JS-API 1.4

What is new:

<https://github.com/Alfresco/alfresco-js-api/releases/tag/1.4.0>

<https://github.com/Alfresco/alfresco-ng2-components/releases/tag/1.4.0>



AGENDA



- 1. Cognitive service intro**
- 2. Cognitive ADF component**
 - **Sentiment analysis**
 - **Language recognition**
 - **Buzzwords Recognition**
 - **OCR Images recognition**
- 3. Integrate the new component in ADF demo shell**
- 4. Define Process**
- 5. Integrate the Process service**

Text Analytics API



Cognitive Services

Extract information from your text:

- Language detection
- Key phrase extraction list of strings denoting the key talking points in the input text.
- Analyze the text content and recognize if there are positive sentiment or negative sentiment



Computer Vision API



Cognitive Services

Extract information from your text:

- Optical Character Recognition (OCR) detects text in an image and extracts the recognized words into a machine-readable character stream.
- Information about visual content found in an image. Use tagging, descriptions and domain-specific models to identify content and label it with confidence

Text analysis sentiment component

1. Get in input a nodeId from the document list and get the content form Alfresco Content Service
2. Post the content to the cognitive Microsoft text analytics API
3. Show the results and save it as Metadata in Alfresco Content Service

Component communication

ADF Document List



Node Id

Sentiment Component



How to use it in your app?...Just a tag

```
<text-analysis [nodeId]="fileNodeId"></text-analysis>
```

Text analysis component in action

	↑ Display name	Tag	Created by	Created on	
	bad.txt		Administrator	Apr 22, 2017, 12:28:43 AM	
	good.txt		Administrator	Apr 22, 2017, 12:28:35 AM	
	ita-good.txt		Administrator	Apr 22, 2017, 3:29:27 AM	

Rows per page: 20 ▾ 1-3 of 3 < >

Language : English

broccoli soup,bad experience,restaurant,Salmon,Choices,cook

Sentiment : 😢

	↑ Display name	Tag	Created by	Created on	
	bad.txt		Administrator	Apr 22, 2017, 12:28:43 AM	
	good.txt		Administrator	Apr 22, 2017, 12:28:35 AM	
	ita-good.txt		Administrator	Apr 22, 2017, 3:29:27 AM	

Rows per page: 20 ▾ 1-3 of 3 < >

Language : English

staff,wonderful experience,rooms

Sentiment : 😊

Sentiment analysis sentiment component Anatomy

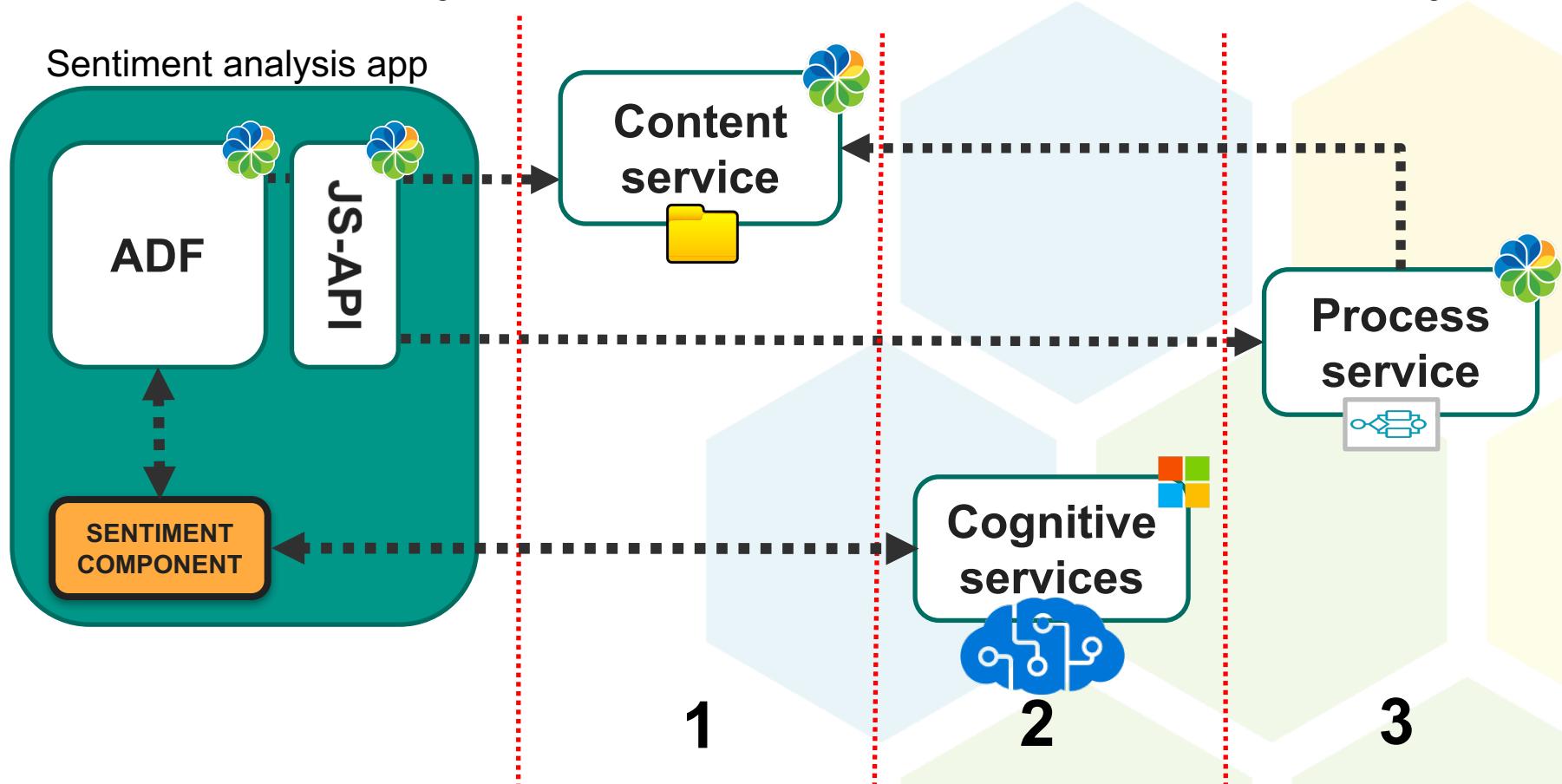


Image analysis component

1. Get in input a NodId and get the Image content form Alfresco Content Service
2. Post the content to the cognitive Microsoft vision API and Get the text
3. Use the Text sentiment analysis in order to receive the sentiment analysis and save it as metadata

How to use it in your app?...Just a tag

```
<image-analysis [nodeId]="fileNodeId"></ image-analysis>
```

Image analysis component in action

"Pizza"

Reviewed yesterday via mobile

Great pizza, great atmosphere and very cheap. Lovely experience easy to find might be a little wait as very popular.

↑ Display name	Tag	Created by	Created on	
bad.txt		Administrator	Apr 22, 2017, 12:28:43 AM	⋮
good.txt		Administrator	Apr 22, 2017, 12:28:35 AM	⋮
ita-good.txt		Administrator	Apr 22, 2017, 3:29:27 AM	⋮
ocr1.jpg		Administrator	Apr 22, 2017, 7:35:24 PM	⋮
Screen Shot 2017-04..		Administrator	Apr 23, 2017, 12:46:56 AM	⋮



Text : "Pizza" Reviewed yesterday O via mobile NEW Great pizza, great atmosphere and very cheap. Lovely experience easy to find might be a little wait as very popular.

Language : English

Great pizza,great atmosphere,Reviewed yesterday,Lovely experience

Sentiment : 😊

Demo moment

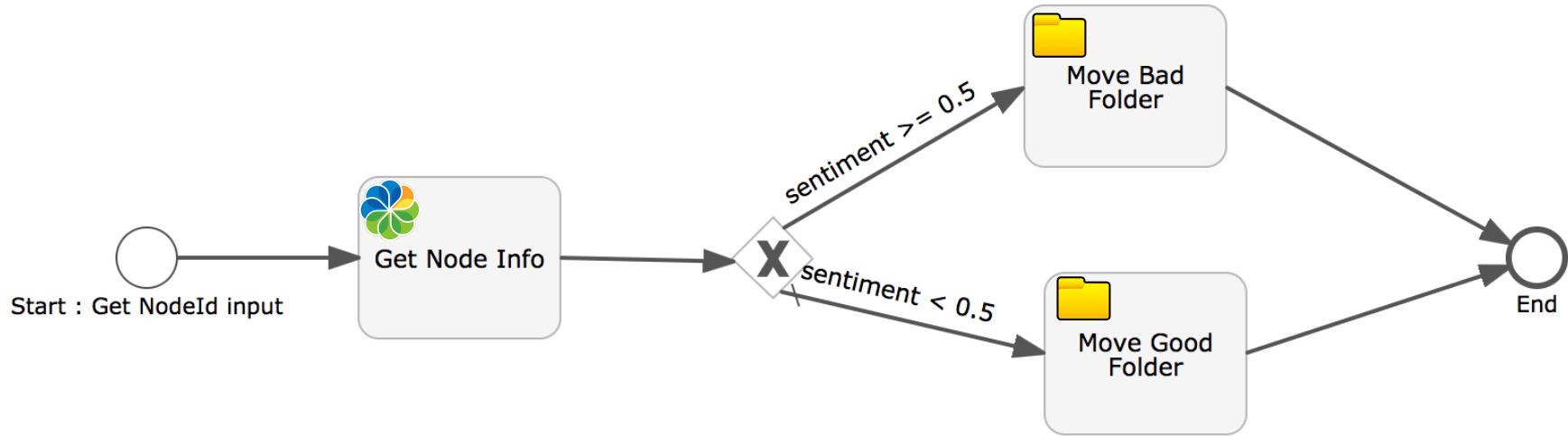
```
0x00000000, 0x016a950, 0x000000b01, 0x00000085)
HANDLEP*** Address 0016a950 has base at 0010b000

.6.2 irq1:if  SYSVER 0xf0000565

Name          Dll Base DateStamp - Name
ntoskrnl.exe 00010000 33247f80  n1.dll
atapi.sys     00007000 33248040  SIPORT.
Disk.sys      001db000 33601560  MASS2.SY
Ntfs.sys      00237000 344eeb40  wvid.sy
NTice.sys     f1f48000 31ec6c6d  floppy.SY
Cdrom.SYS     f228c000 31ec6c90  null.SYS
KSecDD.SYS    f2290000 335e0000  .SYS
win32k.sys    fe0c2000 344eeb40  n1.dll
Cdfs.SYS      fdd2000 31ec6c6d  .SYS
nbf.sys       fdc35000 31ec6c6d  .SYS
netbt.sys     f1f68000 31ec6c6d  .SYS
afd.sys       f2008000 31ec6c6d  .SYS
Parport.SYS   fdd14000 31ec6c6d  .SYS
m_wlde.sys    f1dd0000 31ec6c6d  .SYS
```

A photograph of Bill Gates, co-founder of Microsoft, speaking at a podium. He is wearing glasses and a light blue button-down shirt. He is gesturing with his right hand while speaking. The background is a dark blue wall with white text from a computer screen overlaid.

Process service - Sentiment workflow



How to start a workflow in ADF

```
<activiti-start-process appId="YOUR_APP_ID" [variables]="inputProcessVariable"></activiti-start-process>
```

Documentation

<https://github.com/Alfresco/alfresco-ng2-components/tree/master/ng2-components/ng2-activiti-processlist>

Input component properties

1. **appId** : the Id of the process service that you want start
2. **variables** : process variables of the process that you want initialize

Type
sentimen

Name

START

How to add the Document List in ADF

```
< alfresco-document-list (nodeClick)="yourAction($event)" >..... </alfresco-document-list>
```

Documentation

<https://github.com/Alfresco/alfresco-ng2-components/tree/master/ng2-components/ng2-alfresco-documentlist>

Input/output component properties

Look the documentation 😊

How to make content and process communicate

```
<alfresco-document-list (nodeClick)="yourAction($event)" >..... </alfresco-document-list>
```

```
yourAction(event) {  
    this.fileNodeld = event.value.entry.id;  
  
    this.inputProcessVariable = [];  
  
    let variable: any = {};  
    variable.name = 'nodeld';  
    variable.value = this.fileNodeld;  
  
    this.inputProcessVariable.push(variable);  
}
```

Content service



Process service



```
<activiti-start-process appId="YOUR_APP_ID" [variables]="inputProcessVariable"></activiti-start-process>
```

Final game - How many components in this page?

UPLOAD FILE

Company Home > User Homes
> sentimen

+ Create...

↑ Display name Created by Created on

bad-review	Eugenio romano	Apr 26, 2017, 6:59:09 PM	:
good-review	Eugenio romano	Apr 26, 2017, 7:13:21 PM	:
abstract.txt	Eugenio romano	Apr 27, 2017, 12:46:36 AM	:
content.jpeg	Eugenio romano	Apr 27, 2017, 12:49:37 AM	:

Rows per page: 20 < 1-4 of 4 <

>

How to use an external Angular 2 component and ADF to enrich the Alfresco content service with cognitive analysis metadata and how to start a business process based on the collected data. The goal of the demo is to show the flexibility of the ADF framework and how to use it to integrate an external machine learning service in the Digital Business Platform.

- How to use an external Angular 2 component and ADF to enrich the Alfresco content service with cognitive analysis metadata and how to start a business process based on the collected data. The goal of the demo is to show the flexibility of the ADF framework and how to use it to integrate an external machine learning service in the Digital Business Platform.

- **Language :**

- English

- **Key Phrases :**

- Alfresco content service,external machine learning service,business process,Digital Business Platform,ADF framework,cognitive analysis metadata,flexibility,demo,component,collected data,goal

- **Sentiment :** 😊

-

SAVE

Type

Choose one... ↗

Name

START



The number is 8!

UPLOAD FILE

1

Company Home > User Homes
> sentimen

+ Create...

2

3

4

Display name	Created by	Created on	⋮
bad-review	Eugenio romano	Apr 26, 2017, 6:59:09 PM	⋮
good-review	Eugenio romano	Apr 26, 2017, 7:13:21 PM	⋮
abstract.txt	Eugenio romano	Apr 27, 2017, 12:46:36 AM	⋮

Rows per page: 20 ▾ 1-4 of 4 <

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• Language :

English

• Key Phrases :

Alfresco content service,external machine learning service,business process,Digital Business Platform,ADF framework,cognitive analysis metadata,flexibility,demo,component,collected data,goal

• Sentiment : 😊

SAVE

6

How to use an external Angular 2 component and ADF to enrich the Alfresco content service with cognitive analysis metadata and how to start a business process based on the collected data. The goal of the demo is to show the flexibility of the ADF framework and how to use it to integrate an external machine learning service in the Digital Business Platform.

8

Type
Choose one... ▾

Name

...NO ACTUALLY ARE 10



```
<alfresco-upload-drag-area></ alfresco-upload-drag-area >
```

```
<file-uploading-dialog #fileDialog></file-uploading-dialog>
```

COMPOSITION OVER INHERITANCE

YOU MUST

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