

Exciting New Alfresco REST APIs



Jan Vonka
BeeCon 2017
(Zaragoza)

REST API Agenda

- Introduction
- Overview & Architecture
- Documentation
- What's New & Changed ?
- Demo
- What's Next ?
- Summary



Introduction



Introduction

Jan Vonka

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- Balloonist
- <http://www.slideshare.net/jvonka>

Disclaimer

The information and features presented are subject to change.

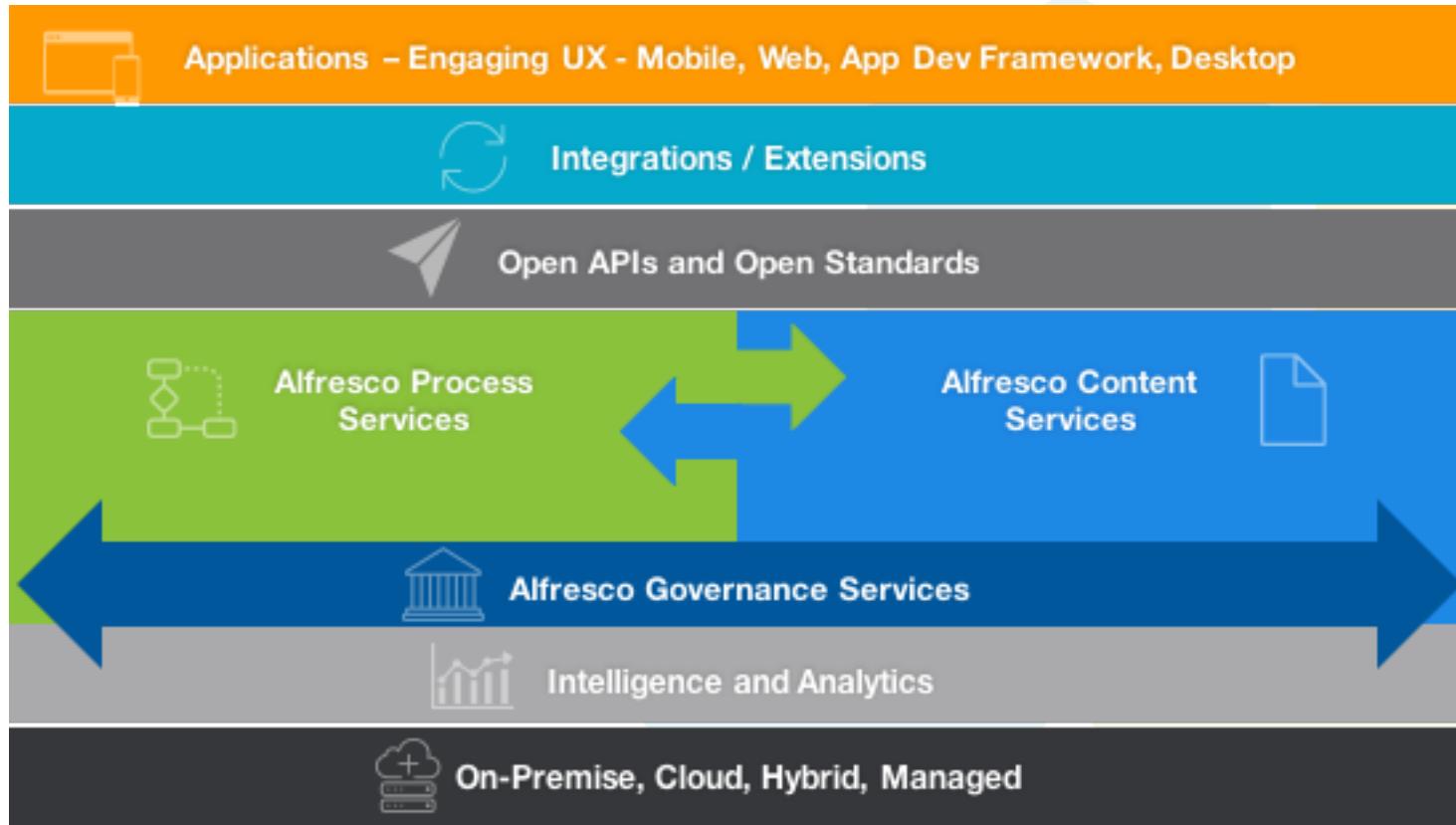


We look forward to collaborating with you to improve and extend the Alfresco APIs ☺

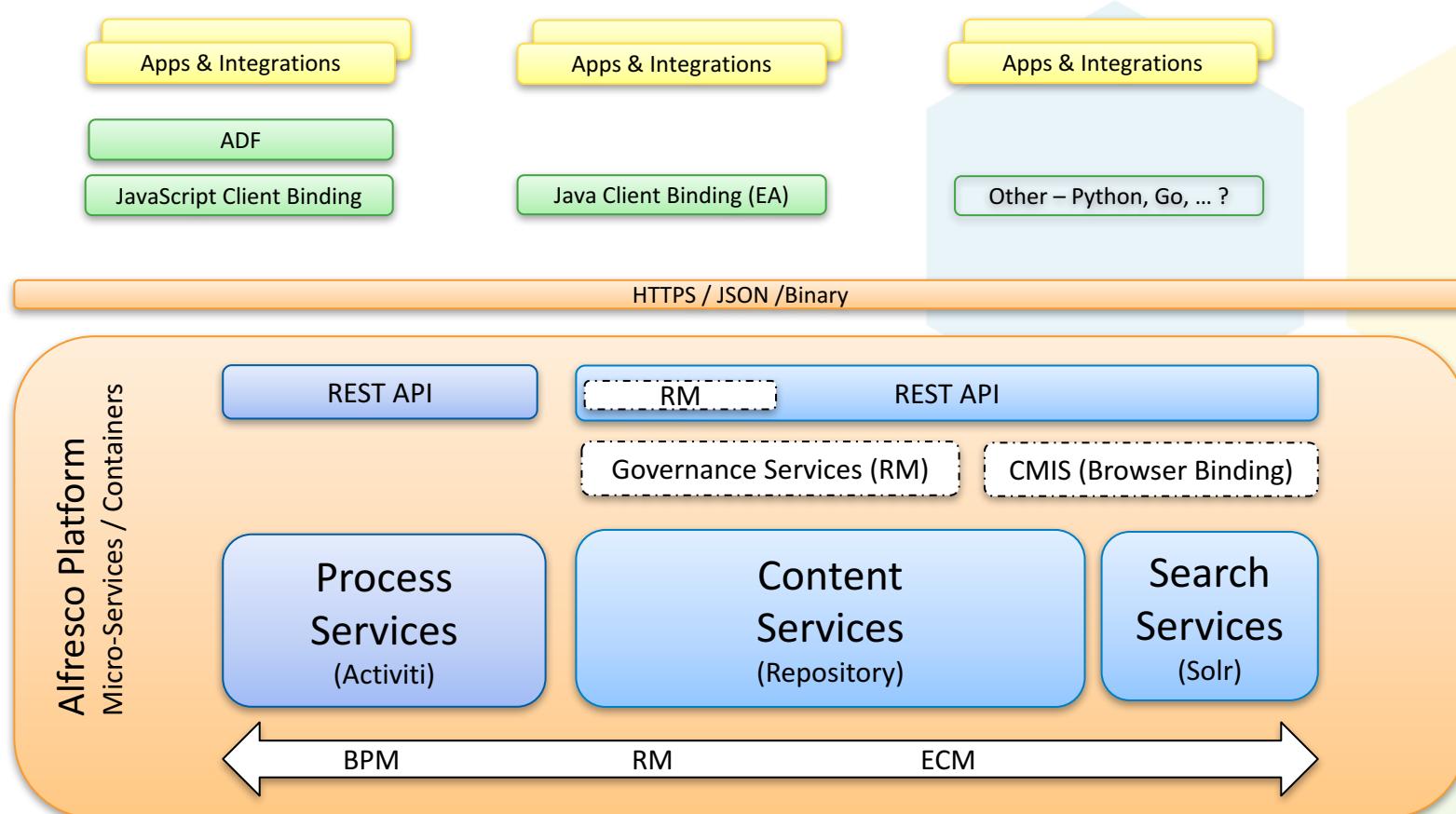
Overview & Architecture



Alfresco Digital Business Platform

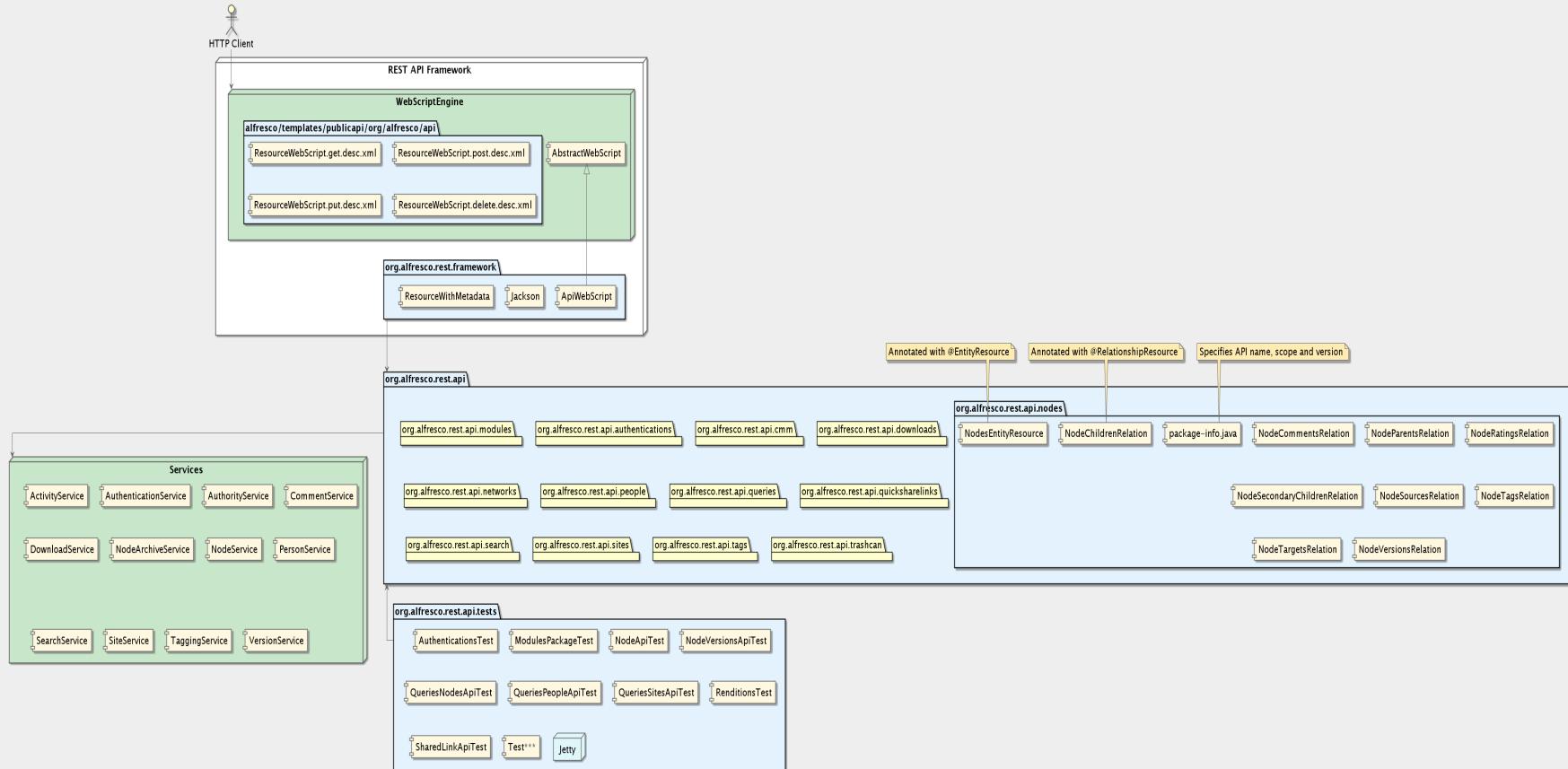


Alfresco API Overview



REST API components

REST API Component Overview



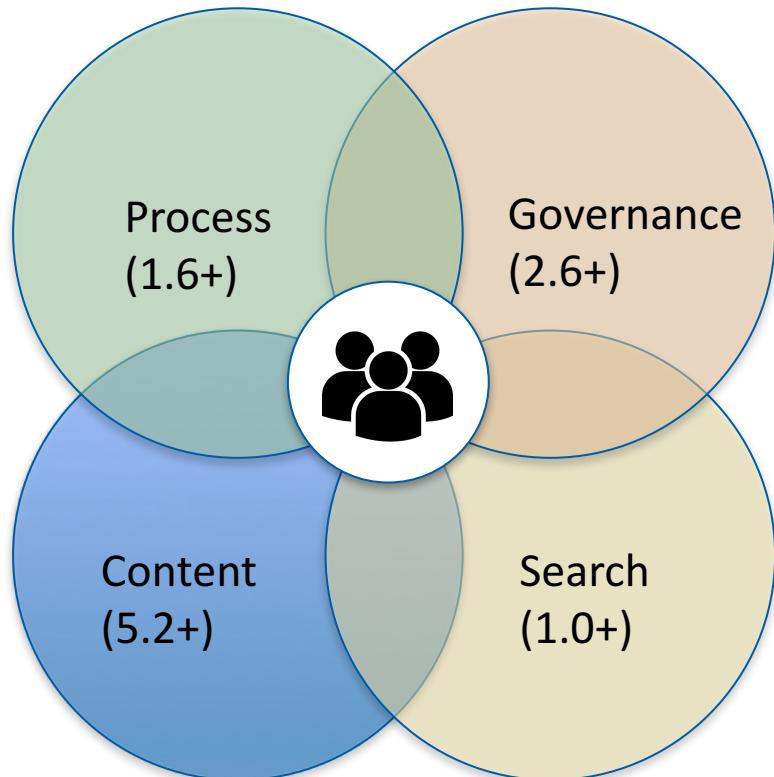
REST API Introduction

- The remote public API for all new clients
 - enabler for Alfresco Digital Business Platform
 - client-driven features
 - contract-first design
- Open API
 - consistent, documented, functional, ...
 - performant, secure, reliable ...

REST API Introduction

- RESTful Framework
 - pragmatic, consistent, well-defined guidelines
 - option for custom / private APIs
 - eg. <https://github.com/covation/quick-api>
- CMIS is still a good option
 - eg. heterogeneous environments (I = interoperability)
- WebScripts
 - custom ("roll-your-own")

Context & Use-cases



- Digital Business Platform
 - Applications & integrations
 - pick & mix services (*)
 - configure &/or discover ...
 - what's enabled
 - incremental new features
 - Enterprise vs Core
- User Roles / Groups
 - End-User vs Administrators
 - Managers – Sites, Records
 - Other Permissions

URL Structure

Deployed Environment

Tenant

Scope

API Name

Version

`https://host:port/alfresco/api/-default-/public/alfresco/versions/1/...`

Method (*)

Entity

Relationship (or Operation**)

GET, POST

/nodes

GET, PUT, DELETE

/nodes/{id}

GET, POST

/nodes/{id}/children

POST

/nodes/{id}/copy

* Where applicable

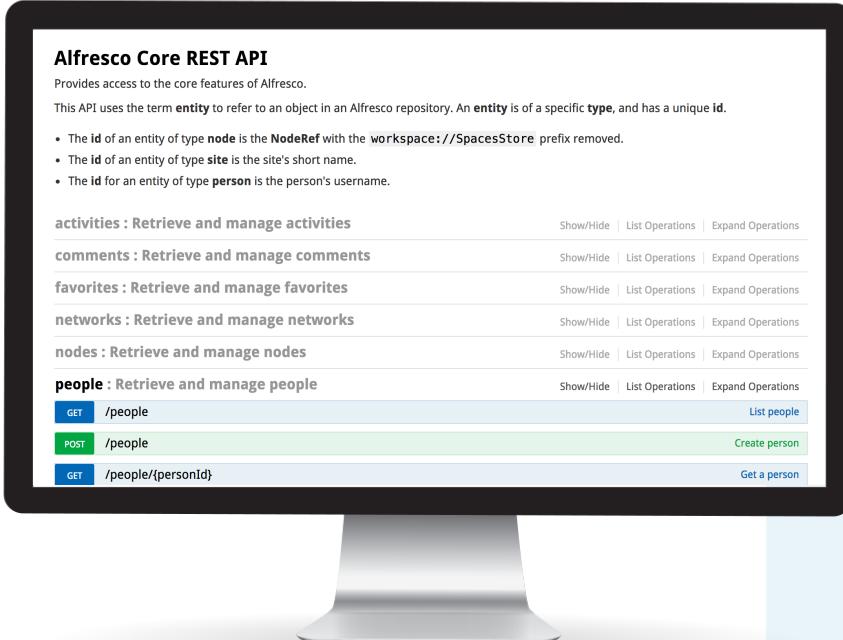
** Operations are new for 5.2 (used for specific scenarios where relationship does not make sense)



Documentation

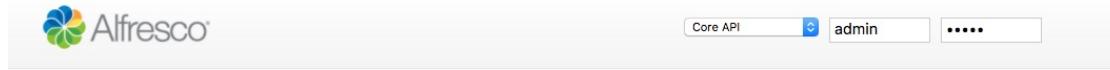


API Explorer



- Is your friend !
- Single source of truth
- Open API Spec (~ Swagger)
- Generate client-side bindings
- Developer resource
 - <http://api-explorer.alfresco.com>
 - <https://github.com/Alfresco/rest-api-explorer>
 - <http://artifacts.alfresco.com>
 - GAV: org.alfresco.api-explorer (5.2.e/5.2.0)

Content Services API (v5.2 +)



Alfresco Content Services REST API

Core API

Provides access to the core features of Alfresco Content Services.

activities : Retrieve and manage activities

Show/Hide | List Operations | Expand Operations

comments : Retrieve and manage comments

Show/Hide | List Operations | Expand Operations

favorites : Retrieve and manage favorites

Show/Hide | List Operations | Expand Operations

networks : Retrieve and manage networks

Show/Hide | List Operations | Expand Operations

nodes : Retrieve and manage nodes

Show/Hide | List Operations | Expand Operations

people : Retrieve and manage people

Show/Hide | List Operations | Expand Operations

preferences : Retrieve and manage preferences

Show/Hide | List Operations | Expand Operations

queries : Find nodes, sites, and people using a simple search term

Show/Hide | List Operations | Expand Operations

ratings : Retrieve and manage ratings

Show/Hide | List Operations | Expand Operations

renditions : Retrieve and manage file renditions

Show/Hide | List Operations | Expand Operations

shared-links : Retrieve and manage public shared links

Show/Hide | List Operations | Expand Operations

sites : Retrieve and manage sites

Show/Hide | List Operations | Expand Operations

tags : Retrieve and manage tags

Show/Hide | List Operations | Expand Operations

trashcan : Retrieve and manage deleted nodes

Show/Hide | List Operations | Expand Operations

versions : Retrieve and manage versions

Show/Hide | List Operations | Expand Operations

Activities

Comments

Favorites

Networks

Nodes (& Associations)

People

Preferences

Queries (Simple)

Ratings

Renditions

Shared-links

Search (Advanced)

Sites

Tags

Trashcan

Versions

Process Services API (v1.6 +)

PS Engine API

Deployments
Process Definitions
Process Instances
Models
Executions
Task Instances
History
Forms
Signals
Management (Tables, Prop's, Jobs)
Identity (Users, Groups)
...

PS Enterprise API



enterprise (/v2/api-docs?group=enterprise) ↗ admin@app.activiti.com

Process Services Enterprise API

Provides access to the complete features provided by Alfresco Process Services powered by Activiti.

You can use this API to integrate Alfresco Process Services with external applications.

Created by Alfresco Software Ltd.

See more at <http://www.alfresco.com/>

about : Information about Alfresco Process Services

Show/Hide | List Operations | Expand Operations

admin-endpoints : Manage endpoints

Show/Hide | List Operations | Expand Operations

admin-groups : Retrieve and manage user groups

Show/Hide | List Operations | Expand Operations

admin-tenants : Manage tenants

Show/Hide | List Operations | Expand Operations

admin-users : Manage users

Show/Hide | List Operations | Expand Operations

app-definitions : Retrieve and manage app definitions

Show/Hide | List Operations | Expand Operations

checklists : Retrieve and manage checklists

Show/Hide | List Operations | Expand Operations

comments : Retrieve and manage comments

Show/Hide | List Operations | Expand Operations

content : Query and manage attached content

Show/Hide | List Operations | Expand Operations

data-sources : Retrieve data sources

Show/Hide | List Operations | Expand Operations

Governance Services API (v2.6 +)

GS Core API

Alfresco Governance Services REST API
GS Core API
Provides access to the core features of Governance Services.

file-plans : Retrieve and manage file plans
files : Perform operations on non-record files
gs-sites : Retrieve and manage the RM site
record-categories : Retrieve and manage record categories
record-folders : Retrieve and manage record folders
records : Perform record specific operations
transfer-containers : Retrieve and manage transfer containers
transfers : Retrieve and manage transfers
unfiled-containers : Retrieve and manage unfiled records containers
unfiled-record-folders : Retrieve and manage unfiled record folders

[BASE URL: /alfresco/api/-default-/public/gs/versions/1 , API VERSION: 1]

GS Classification Guide API

Alfresco Governance Services REST API
GS Security Marks
Provides access to classification and security mark related features.

classification-guides : Retrieve and manage classification guides.

HTTP Method	URL	Description
GET	/classification-guides	Show all classification guides
POST	/classification-guides	Create a classification guide
DELETE	/classification-guides/{classificationGuideId}	Delete specific classification guide and all descendants
GET	/classification-guides/{classificationGuideId}	Get information about a specific classification guide
PUT	/classification-guides/{classificationGuideId}	Update specific classification guide
GET	/classification-guides/{classificationGuideId}/topics	List all topics
POST	/classification-guides/{classificationGuideId}/topics	Create a topic
DELETE	/topics/{topicId}	Delete specific topic and all descendants
GET	/topics/{topicId}	Get information about a specific topic
PUT	/topics/{topicId}	Update specific topic
GET	/topics/{topicId}/subtopics	List all subtopics
POST	/topics/{topicId}/subtopics	Create a subtopic

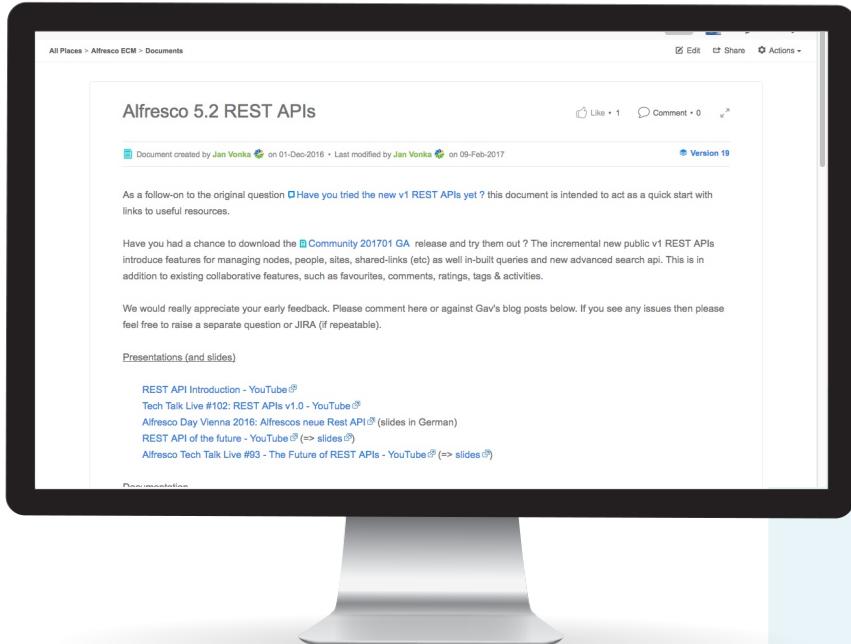
[BASE URL: /alfresco/api/-default-/public/gs/versions/1 , API VERSION: 1]

File plans, record categories, record folders, records, etc.

Community: Blog Post Series

- Alfresco v1 REST API by Gavin Cornwell (includes Postman collections)
 - [Part 1 - Introduction](#)
 - [Part 2 - Navigation](#)
 - [Part 3 - Creating Nodes & Uploading Content](#)
 - [Part 4 - Managing Nodes & Download Content](#)
 - [Part 5 - Versioning & Locking](#)
 - [Part 6 - Associations](#)
 - [Part 7 - Collaboration \(Comments, Ratings, Tags, ...\)](#)
 - [Part 8 - Sites](#)
 - [Part 9 - Queries & Search](#)
 - [Part 10 - People](#)

Community links - REST APIs



- Links to lots of resources
 - Blogs
 - Videos
 - Presentations
 - Bindings
 - Sample clients
 - Docs

<https://community.alfresco.com/docs/DOC-6532-alfresco-52-rest-apis>



What's New
& Changed ?

What's New – Content Services 5.2

- 56 new endpoints
 - Core API
 - Authentication API
 - Discovery API
 - Search API
- REST Framework enhancements
 - return less => fields query param
 - return more => include query param (API specific)
 - operations (eg. /copy, /move, /lock, /unlock, /revert, /restore, ...)
 - @WebApiNoAuth

Simple Content Example

Upload content

```
curl -utest:test -X POST  
http://localhost:8080/alfresco/api/-default-/public/alfresco/versions/1/nodes/-my-/children -F filedata=@test.docx
```

Download content

```
curl -utest:test -X GET  
http://localhost:8080/alfresco/api/-default-/public/alfresco/versions/1/nodes/99a40be1-268f-4b8e-ab49-866747bbd660/content
```

Core API

.../alfresco/api/-default-/public/alfresco/versions/1/...

- **/nodes/{nodeId}**
 - Navigation
 - Content
 - Information
 - Operations include: Copy, Move, Lock, Unlock
 - Associations
- **/nodes/{nodeId}/renditions**
- **/nodes/{nodeId}/versions**
 - Operations include: Revert

Core API

.../alfresco/api/-default-/public/alfresco/versions/1/...

- **/deleted-nodes**
 - Operations: Restore
- **/queries**
 - /nodes
 - /people
 - /sites
- **/shared-links**
 - public share, unshare, find, ...
 - expiration (new)

Authentication API

.../alfresco/api/-default-/public/authentication/versions/1/...

- **/tickets**
 - Login
 - Logout
 - Validate

Discovery API

.../alfresco/api/...

- **/discovery**
 - Version information
 - License information (Enterprise only)
 - Status
 - isReadOnly
 - isQuickSharedEnabled
 - ...
 - Installed modules



Search API

.../alfresco/api/-default-/public/search/versions/1/...

- **/search**

- Low level search API (effectively exposes Java API)
- AFTS, CMIS, Lucene support
- Faceting
- Spellcheck
- Term highlighting
- Search nodes, versions or deleted-nodes

Enhanced APIs

.../alfresco/api/-default-/public/alfresco/versions/1/...

- **/sites**
 - Create site (no custom preset support yet)
 - Update site details
 - Delete site
- **/people**
 - List people (no filtering)
 - Create person
 - Update person
 - Enable/Disable (admin only)

Demo



Postman Collection

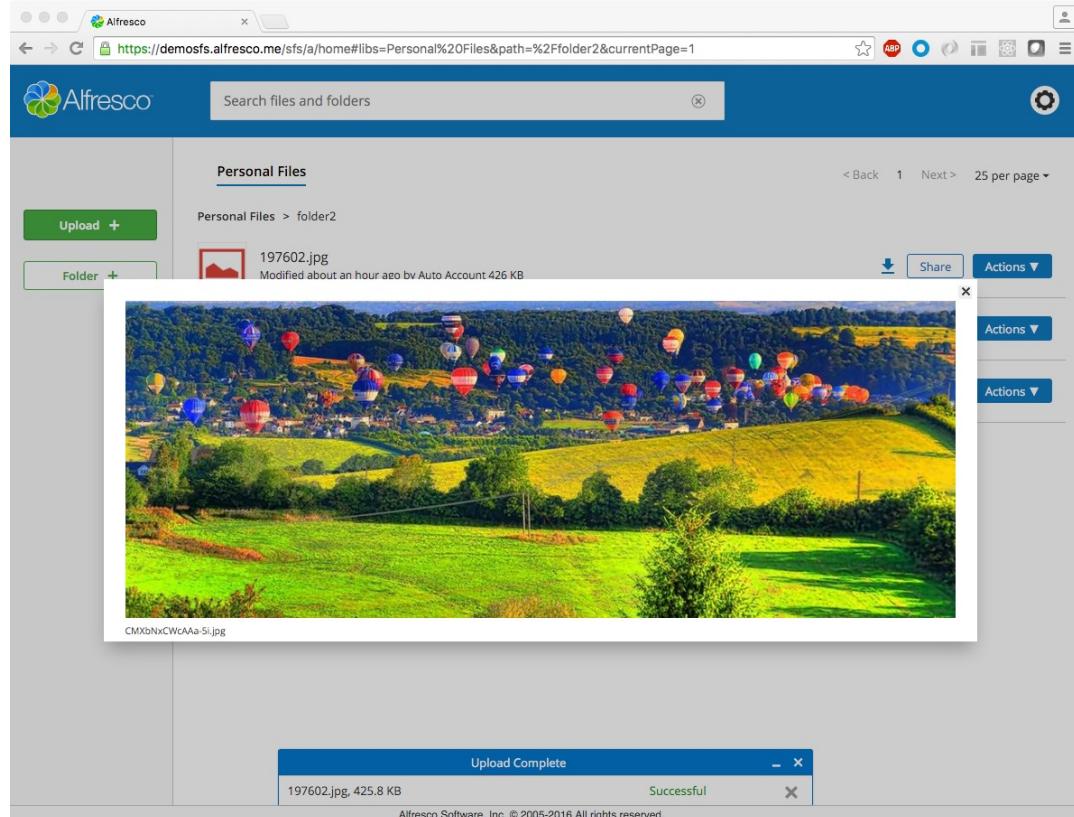
<https://www.getpostman.com/collections/3b55c5964cdf44c4836c>

The screenshot shows the Postman Builder interface. On the left, there's a sidebar with a collection tree. A node labeled 'List children' is highlighted with an orange background. The main area shows a request configuration for a GET request to 'http://localhost:8080/alfresco/api/default/public/alfresco/versions/1/nodes/-/my-children?includ'. The 'Authorization' tab is selected, showing 'No Auth'. The 'Body' tab is selected, displaying a JSON response. The response is a multi-line JSON object:

```
1. "list": {
2.   "pagination": {
3.     "count": 7,
4.     "hasMoreItems": false,
5.     "totalItems": 7,
6.     "skipCount": 0,
7.     "maxItems": 100
8.   },
9.   "entries": [
10.     {
11.       "entry": {
12.         "aspectsNames": [
13.           "cm:title",
14.           "cm:auditable",
15.           "app:perfexts"
16.         ],
17.         "createdAt": "2017-01-28T19:30:55.792+0000",
18.         "isDraft": false,
19.         "isFile": false,
20.         "createdByUser": {
21.           "id": "System",
22.           "displayName": "System"
23.         },
24.         "modifiedAt": "2017-02-01T13:18:50.382+0000",
25.         "modifiedByUser": {
26.           "id": "admin",
27.           "displayName": "Administrator"
28.         },
29.         "name": "Dictionary",
30.         "id": "383da0b-d485-4b50-9762-05cb230e1b09",
31.         "nodeType": "cm:folder",
32.         "properties": {
33.           ...
34.         }
35.       }
36.     }
37.   ]
38. }
```

- File -> Import -> Import From Link

Simple File Sharing prototype (new APIs)



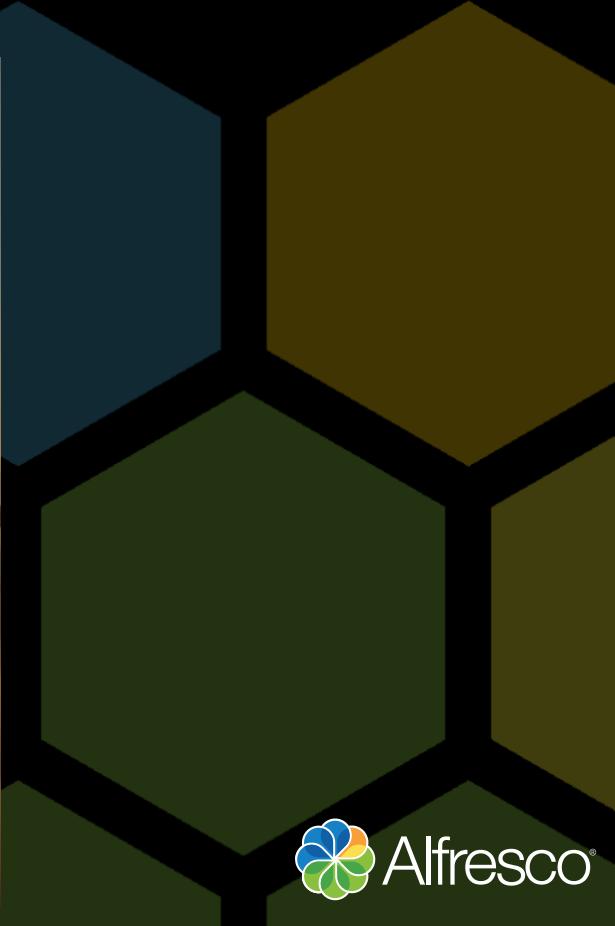
Files & Folders
Upload & Download
Preview
Live Search
Shared Links
Move & Copy
Delete & Undo

....

Client Bindings & Example Apps

- JavaScript Client + ADF
 - ADF 101 tutorial blogs
 - HealthCare Demo App
- Java Client (Early Access)
 - Java Client blogs
 - basis for new Android client(s)
- Developer Ecosystem - Partners & Community ☺

What's Next ?



Futures

- More Services exposed
 - Content 5.2.x - Groups, ... Audit, Repo Actions, Avatar ?
 - Governance 2.6.x – Core & Classification Guide
 - REST Framework improvements (eg. Batch)
- Other Enhancements
 - Event Streams / Change Log
 - Callbacks - eg. Queues, Web Hooks, Server-Sent Events ?



Futures

- Your feedback
 - which services to expose next
 - new features driven by your key use-cases
- Contribute ? – pull/merge requests (via git)
 - API spec – consistent with existing style & guidelines
 - Implementation code
 - Test code to validate behaviour (+ve & -ve)



Summary



References

- Alfresco REST APIs (with more links)

<https://community.alfresco.com/docs/DOC-6532-alfresco-52-rest-apis>

- API Explorer

<https://api-explorer.alfresco.com>

<https://github.com/Alfresco/rest-api-explorer>

- Intro Video

<https://www.youtube.com/watch?v=XiU9MMw8LG0>

Thank You



Jan Vonka

<https://www.slideshare.net/jvonka>