GIANCARLO GOMEZ

Building APIs with Adobe ColdFusion

and the REST is easy

Who am I?

- Proud Father of 3

- Web Developer since 1999

- Freelance / Independent since 2001

- Owner of Fuse Developments, Inc and CrossTrackr Inc.

- South Florida ColdFusion User Group Co-Manager

REST ASSURED
by Adam Tuttle

http://restassuredbook.com/

REST

REST, or **RE**presentational **S**tate **T**ransfer, is a method for computer programs to talk to each other over networks. It is a set of generalized conventions that make it easier for API-client developers to understand how to manage data over network protocols - like HTTP - with very little additional context and documentation

A REST Request

- Noun (resource)

- Verb (http method)

- Mime/Type

- Headers

- Data

A REST Response

- Status Code

- Status Text

- Headers

- Data

The VERBS

- **GET** is for reading

- **POST** is for creating

- **PUT** is for updating

- **DELETE** is for deleting

- **PATCH** like **PUT** but meant for partial updating
  * Coming to ACF 2016 in a patch and included in future versions

- **HEAD** like GET but only returns the Headers

- **OPTIONS** used to pre-flight a request

The Status Codes

- **200** - Success

- **400** - Bad Request

- **401** - Not Authorized

- **403** - Forbidden

- **404** - Not Found

- **500** - Server Error

Security

- SSL or TSL

- Basic Auth

- Inline Login that Provisions a Key

- oAuth

- CORS

What makes a good API?

Versioning

&

Documentation

Registering a REST Application in ACF

- ## ColdFusion Admin
  `Data & Services > REST Services`

- ## Application.cfc
  `this.restSettings`

- ## restInitApplication()
  `Register or refresh an existing REST Application in code`

- ## ColdFusion Admin API

Creating a REST CFC

- **Component**
  - **rest** = true
  - **restpath** = "version/noun"

- **Functions** (*access has to be set to remote to expose as a REST resource*)
  - **httpmethod** = "GET,POST,PUT,DELETE,HEAD,OPTIONS"
  - **restpath** = "{id}"
  - **produces** = "json"
  - **consumes** = "mimetype"

- **Arguments**
  - **restargsource** = "path, query, form, matrix, header or cookie"

Accessing our REST API

- /rest and /api mappings are defined for easy use

  - `uriworkermap.properties`

  - `/wwwroot/WEB-INF/web.xml`

```
/rest/* = cfusion
/api/* = cfusion
```

- If not default rest application you have to pass service mapping

  - `/api|rest/{{service_mapping}}/{{noun}}`
    There is a trick to avoid this using a little URL Rewrite magic

```
686    <servlet-mapping id="coldfusion_mapping_15">
687        <servlet-name>CFRestServlet</servlet-name>
688        <url-pattern>/rest/*</url-pattern>
689    </servlet-mapping>
690    <!-- begin Security Analyzer -->
691    <servlet-mapping id="coldfusion_mapping_23">
692        <servlet-name>CFSecurityAnalyzerServlet</servlet-name>
693        <url-pattern>/securityanalyzer/*</url-pattern>
694    </servlet-mapping>
695    <!-- end Security Analyzer -->
696    <servlet-mapping id="coldfusion_mapping_16">
697        <servlet-name>CFRestServlet</servlet-name>
698        <url-pattern>/api/*</url-pattern>
```

We learn best by example
So lets look at some code

`https://github.com/GiancarloGomez/ColdFusion-DCSummit-Rest`

Other Options

- **Taffy**

  http://taffy.io/

- **Framework One**

  http://framework-one.github.io/documentation/4.0/developing-applications.html#controllers-for-rest-apis

- **ColdBox**

  https://coldbox.ortusbooks.com/content/full/recipes/building_rest_apis.html

Tools

- **Postman**
  https://www.getpostman.com/

- **Paw**
  https://paw.cloud/

- **ColdBox Relax**
  https://coldbox-relax.ortusbooks.com/

- **ColdFusion API Manager**
  https://helpx.adobe.com/coldfusion/api-manager/features-summary.html

Have Fun Creating!

Useful Links

- **Application variables**
  https://helpx.adobe.com/coldfusion/cfml-reference/application-cfc-reference/application-variables.html

- **Getting started with RESTful web services in ColdFusion**
  http://www.adobe.com/devnet/coldfusion/articles/restful-web-services.html

- **RESTful Web Services in ColdFusion**
  https://helpx.adobe.com/coldfusion/developing-applications/changes-in-coldfusion/restful-web-services-in-coldfusion.html

- **HTTP Status Codes from REST API Tutorial**
  http://www.restapitutorial.com/httpstatuscodes.html

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