

Filemaker & Drupal

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Today's Program

1. About me
2. Why FileMaker?
3. Methods for Synchronization
4. What are Web Services?
5. Implementation Overview

About
Derek



About Me.

- 2008** Graduated Georgia Tech with BS in CS
- 2010** Introduced to Drupal
- 2011** Launched first Drupal 6 site
- 2012** Launched two Drupal 7 sites
- 2013** Came to work for Mediacurrent

My first project at Mediacurrent?

FileMaker & Drupal integration!



The
Project



My first MC Client

- FileMaker back-end: Customers, Orders, Products
- Orders submitted via Webform (D6)
- Then processed manually
- Lots of inefficiency, opportunity for automation
- Goal: Automate communication of commerce data between FileMaker and Drupal



What is
FileMaker?



FileMaker

- Powerful, easy-to-use database software
- Made for non-technical users (no coding)
- Easily create forms, reports, labels, etc.
- Drag & drop scripting editor
- Web-publishing engine
- Mobile app



Fecha de creación

nombre

ingredientes Para

Ingredientes Básicos

| | Ingredientes | Cantidad |
|---|----------------|----------|
| 1 | huevos grandes | 3 |
| 2 | Harina | 150 gr |
| 3 | azúcar | 150 gr |
| 4 | mantequilla | 100 gr |
| 5 | levadura | |

otros Ingredientes

| | ingredientes | Cantidad |
|---|----------------|----------|
| 1 | aroma al gusto | |
| + | | |
| f | | |
| | | |
| | | |



Preparacion

1-montar 2 claras y la mitad del azúcar
2-Tamizar la Harina y la levadura
3-Mezclar la mantequilla y añadir, el azúcar, las yemas, el huevo restante, y el aroma
4-Añadir a la mezcla anterior la harina y las claras montadas. Realizar ETA mezcla con una espátula y de forma envolvente
5-Hornear a 200 grados 15 minutos (Puede variar temperatura o tiempo dependiendo del horno)

dificultad

Over 9 zillion people use

FileMaker



Let's get
Synchronized!



Option 1

FileMaker PUSH + Drupal PUSH = Simplest Solution



FileMaker Scripts
+ HTTP Plugin
Push data to
"Drupal Services"



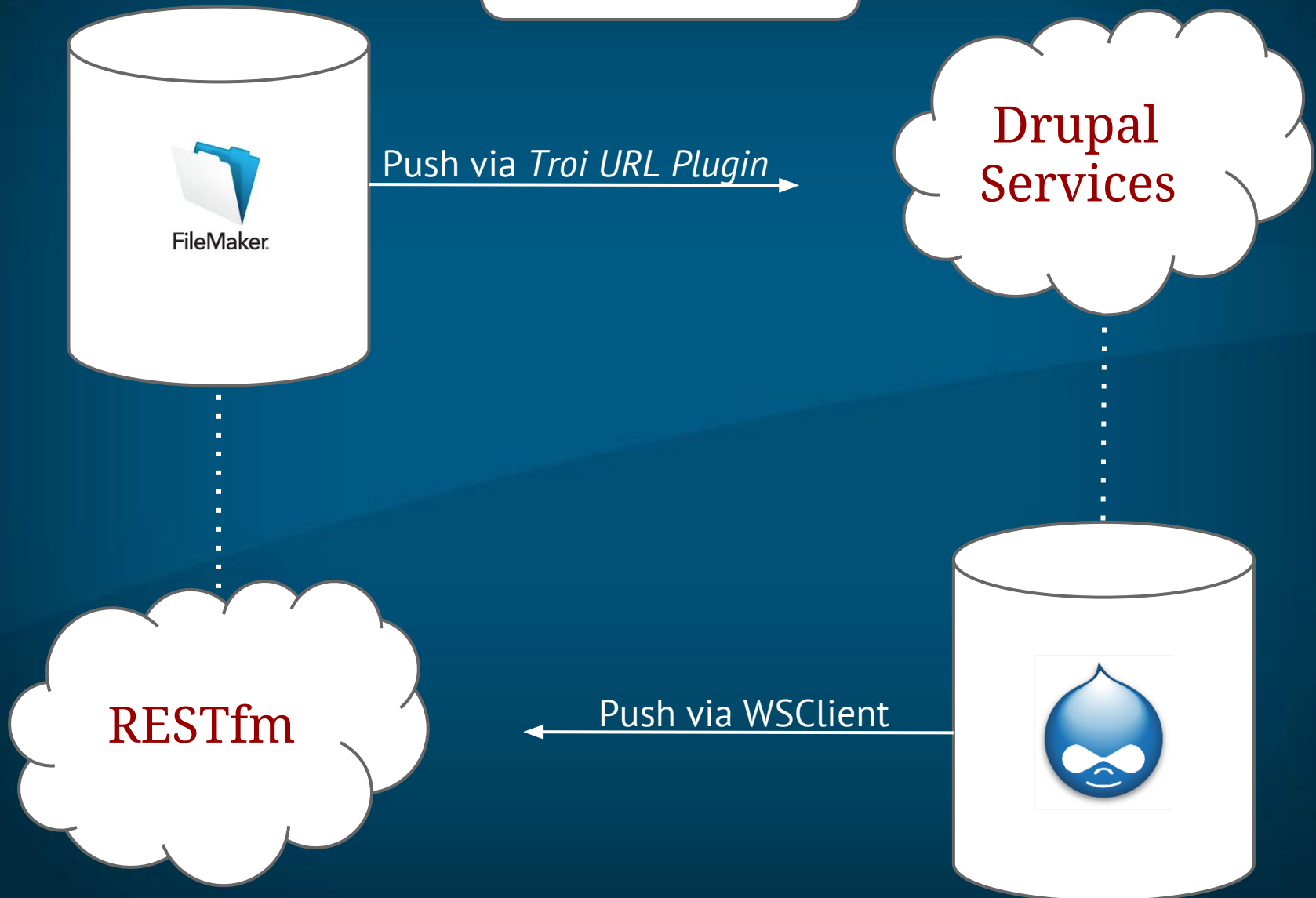
WSClient module
+ Drupal Rules
Push data to
"FileMaker RESTfm"



Happy Devs.
Happy Client.
Happy Buddha!



Option 1



Not so fast,
Buckaroo





- FileMaker hooks are quirky: No easy way to capture create/delete/update actions.
- Plus, FileMaker scripting = easy-to-learn but a headache for developers.
- In the end, too much dependency on client to develop and maintain the FileMaker scripts.
- How to get FileMaker changes into Drupal?



Gotta be a
Better Way

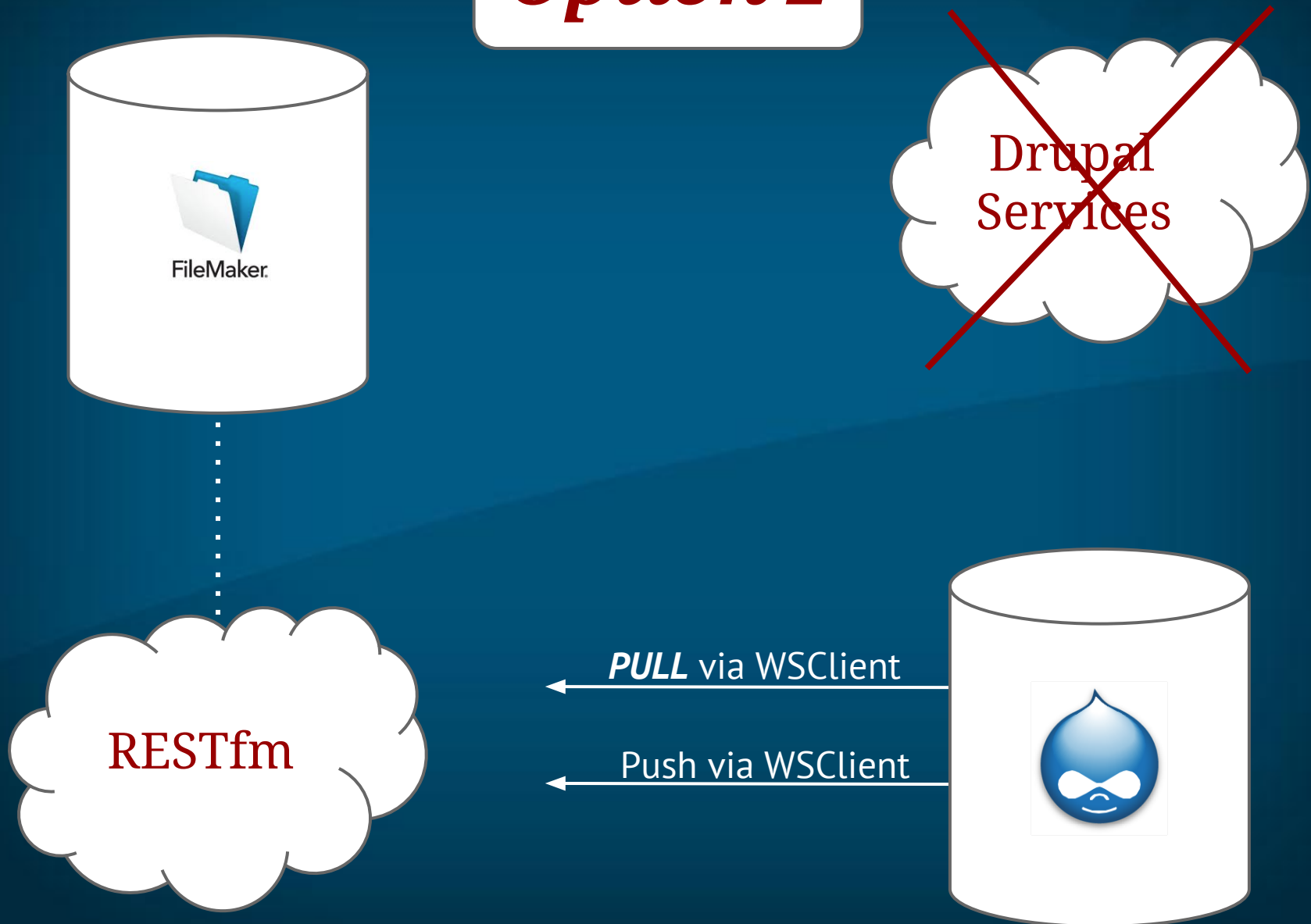


Option 2

- FileMaker is *NOT* developer-friendly
- So let Drupal do the *heavy lifting*
- No change to Drupal→FM PUSH
- Replace FM→Drupal PUSH with a Drupal sync script that PULLs records from FileMaker



Option 2



(super secret)

Option Three





What are
Web Services?



RESTful Web Services

- REST = Representational State Transfer
- Exposes resources in a standard way for external "consumption"
- Data sent and retrieved in standard formats: XML, JSON, etc.
- Follows a standard URL pattern for interaction:

| <i>Action</i> | <i>HTTP method</i> | <i>URI</i> |
|----------------------|---------------------------|--------------------------|
| CREATE | POST | /resource-type |
| RETRIEVE | GET | /resource-type/id |
| UPDATE | PUT | /resource-type/id |
| DELETE | DELETE | /resource-type/id |
| LIST / INDEX | GET | /resource-type |

Drupal → FileMaker
PUSH



PUSH via Rules

React on Events

- Entity Create, Update, or Delete
- Commerce Checkout

Conditions

- Entity is of Bundle
- Field "Do-Not-Sync" = FALSE

Actions

- Create Data Structures to hold entity data
- Execute WSCClient operation to send REST request



Drupal ← FileMaker
PULL



Pulling FM Records

Custom Module

- LIST records and process them into Drupal Entities
- Hint: EntityMetadataWrapper is your friend

Cron Job

- Executes your custom module's sync code
- Ideal frequency? Every few minutes

Preventing Timeout

- Use RESTfm filters and timestamp fields to limit LIST response
- For recordsets < 100, easier to just sync all records



Further Reading

Mediacurrent Blog post with PUSH details:

<http://bit.ly/XBBVhc>

Mediacurrent Blog post with PULL details:

<http://bit.ly/WRdAqR>





What Did You Think?

Please Evaluate this session at:
fldrupalcamp.org/program/schedule

Questions?

Further Reading:

- <http://www.mediacurrent.com/blog/featured-recipe-filemaker-and-drupal>
- <http://www.mediacurrent.com/blog/9-steps-sync-your-filemaker-data-drupal>

