

No API, No Problem

A recipe for connecting to external databases

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https://github.com/ejdunn2001/drupal_ext_db_example

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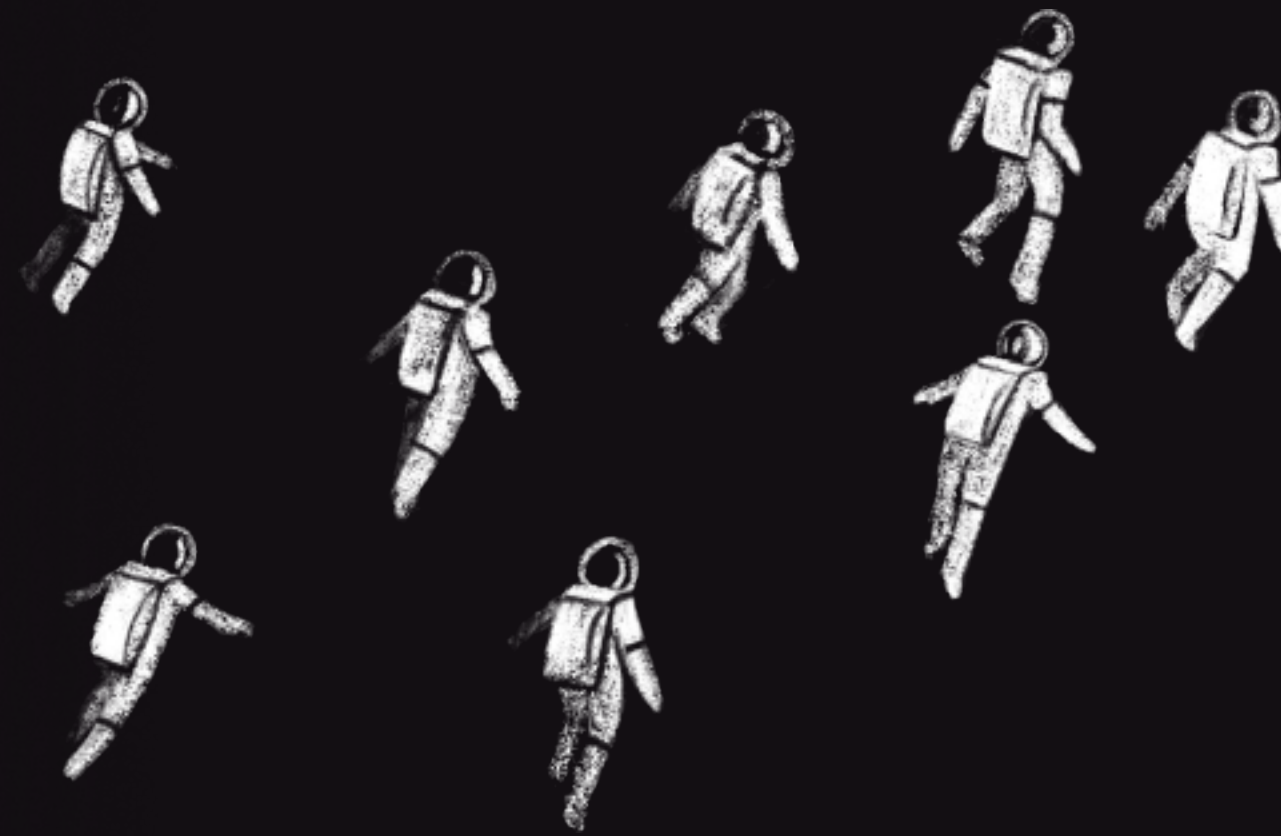




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HUMAN
RIGHTS
WATCH







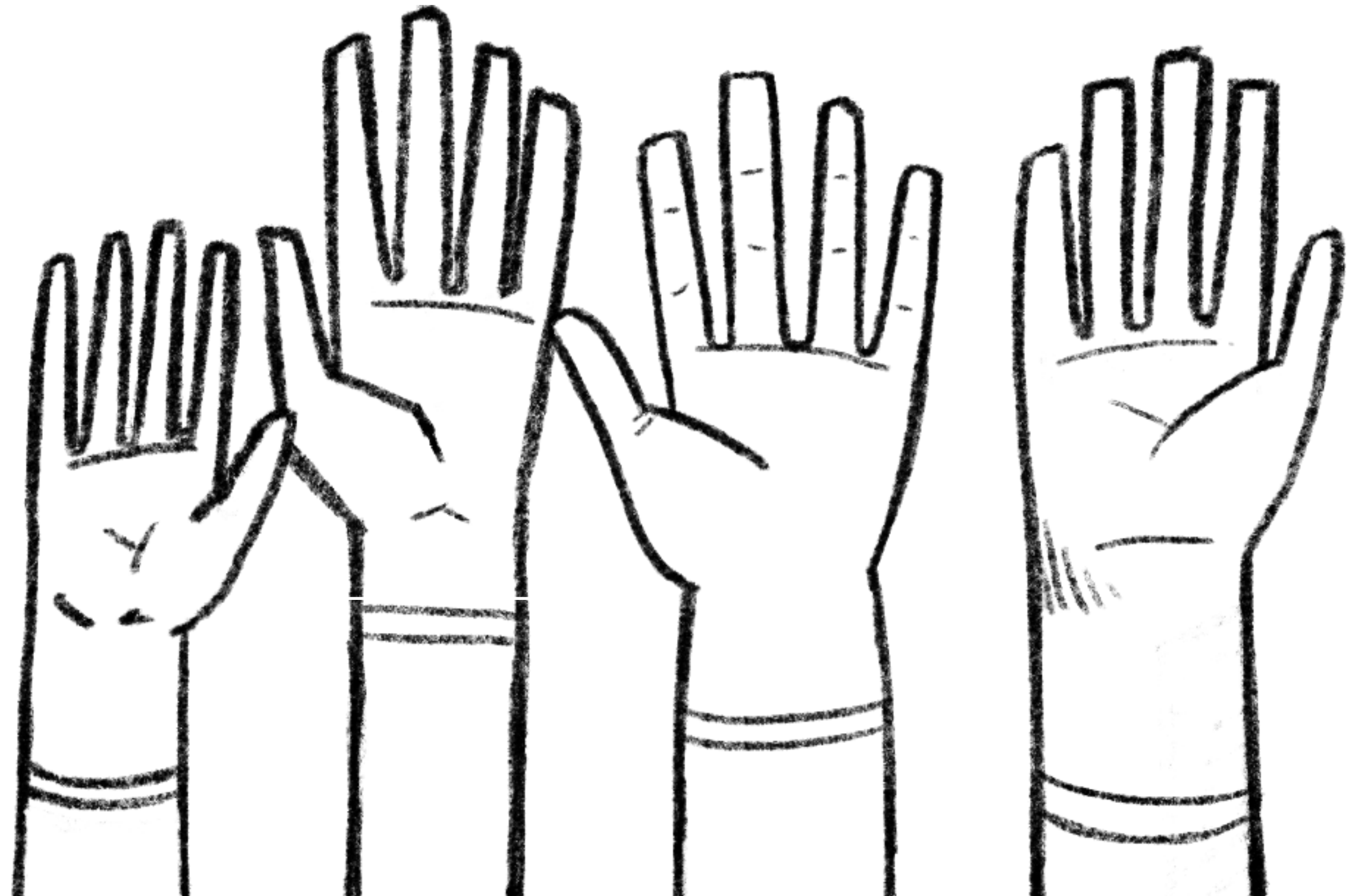
WORKSHOPS

Afternoon
chat
1st Time
Verbal
Lunch
Uncertainty
Multi





Have you ever had to access external data either via an API or a direct database connection?



The Challenge

- Access an external data store
- Use that data to create and update nodes
- Automate the process

The Discovery

- Could we use a RESTful API?
- Could we connect directly to the database?
- Was there any other way of moving this data i.e. Feeds

The Solution

- A direct connection to an external database
- A cron job to run the service regularly
- A service to query the external database

The Default Connection

```
$databases['default']['default'] = [  
  'database' => 'default_drupal_db',  
  'username' => 'USERNAME',  
  'password' => 'PASSWORD',  
  'prefix' => '',  
  'host' => 'localhost',  
  'port' => '3306',  
  'namespace' => 'Drupal\\Core\\Database\\Driver\\mysql',  
  'driver' => 'mysql',  
];
```

/sites/default/settings.php

The External Connection








```
$databases['external_database']['default'] = [  
  'database' => 'externaldb',  
  'username' => 'USER',  
  'password' => 'PASSWORD',  
  'prefix'   => '',  
  'host'     => 'localhost',  
  'port'     => '3306',  
  'driver'   => 'mysql',  
];
```

/sites/default/settings.php

A Custom Module

```
— folder mymodule_external_database
  YA ML mymodule_external_database.info.yml
  elephant mymodule_external_database.module
```


The Structure

```
-  mymodule_external_database
  -  src
    +  ExternalDatabaseUpdateInterface.php
    +  ExternalDatabaseUpdateService.php
     mymodule_external_database.info.yml
     mymodule_external_database.module
     mymodule_external_database.services.yml
```


The .module

```
/**
 * Implements hook_cron().
 *
 * Cron run to update articles based on the external database.
 * This calls the update as a service limiting what has to be
 * done in the actual hook_cron() function.
 */
function mymodule_external_database_cron() {
  \Drupal::service('mymodule_external_database.update')->update();
}
```

/modules/custom/mymodule_external_database/mymodule_external_database.module

The Services

```
services:  
  logger.channel.mymodule_external_database:  
    parent: logger.channel_base  
    arguments: ['external_database']  
  externaldb:  
    class: Drupal\Core\Database\Connection  
    factory: Drupal\Core\Database\Database::getConnection  
    arguments: [default, external_database]
```

/modules/custom/mymodule_external_database/mymodule_external_database.services.yml

The Interface

```
namespace Drupal\mymodule_external_database;

/**
 * Interface ExternalDatabaseUpdate.
 */
interface ExternalDatabaseUpdateInterface {
    /**
     * Adds or updates articles.
     */
    public function update();
}
```

/modules/custom/mymodule_external_database/src/ExternalDatabaseUpdateInterface.php

Adding the Update Service

```
services:
  logger.channel.mymodule_external_database:
    parent: logger.channel_base
    arguments: ['external_database']
  externaldb:
    class: Drupal\Core\Database\Connection
    factory: Drupal\Core\Database\Database::getConnection
    arguments: [default, external_database]
  mymodule_external_database.update:
    class: Drupal\mymodule_external_database\ExternalDatabaseUpdateService
    arguments: ['@externaldb', '@logger.channel.external_database',
 '@entity_type.manager', '@state', '@datetime.time']
```

/modules/custom/mymodule_external_database/mymodule_external_database.services.yml

The Service Code

`/modules/custom/mymodule_external_database/src/ExternalDatabaseUpdateService.php`

Questions?

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