Creating Your First Web Service Integration From Core APIs
The REST-like Moodle WebServices API

- REST-like not RESTful
  - All calls are POST
  - Return 200 HTTP statuses, even on failure
  - Functions are parameters instead of URIs

- Core WebService calls are highly focused on Mobile App functionality
• Define the integration
  • User Management
  • Courses
  • Enrollments
  • Completion??
Investigate

- API Documentation
- Site administration -> Plugins -> Web services -> API Documentation

- core_user_add_user_device
- core_user_add_user_private_files
- core_user_agree_site_policy
- core_user_create_users
- core_user_delete_users
- core_user_get_course_user_profiles
- core_user_get_private_files_info
- core_user_get_user_preferences
- core_user_get_users
- core_user_get_users_by_field
- core_user_remove_user_device
- core_user_set_user_preferences
- core_user_update_picture
- core_user_update_user_preferences
- core_user_update_users
- core_user_view_user_list
- core_user_view_user_profile
- External Services
  - Site administration -> Plugins -> Web services -> External services
Add Functions

- Functions
  - Site administration -> Plugins -> Web services -> External services -> Functions

00_MyWebService

Add functions

Name

- core_user_create: Create users.
- core_user_get: Search for users matching the parameters.
- core_user_update: Update users.

core_user_create

Add functions Cancel

There are required fields in this form marked .
Create Your WebService User

- Add a new user
- Site administration -> Users -> Accounts -> Add a new user

**General**

- Username: wsuser
- Choose an authentication method: Web services authentication
- Suspended account: No
- Generate password and notify user: Yes

Password requirements:
The password must have at least 8 characters, at least 1 digit(s), at least 1 lower case letter(s), at least 1 upper case letter(s), at least 1 non-alphanumeric character(s) such as @, #, or $.

- New password: [Click to enter text]
- Force password change: No

- First name: MyWebService
- Last name: User
- Email address: jesse.safran@ethinkeducation.com
Add Your User to Your WebService

- Authorized users
  - Site administration -> Plugins -> Web services -> External services -> Authorized users

Authorized users (1)
00_MyWebService User

Too many users (134) to show
Please use the search

Search
Search options
Change settings for the authorized users

00_MyWebService User, jesse.safran2@rethinkeducation.com
Missing capabilities: moodle/usercreate, moodle/userviewdetails, moodle/userviewhiddendetails, moodle/courseuseremail, moodle/userupdate
Create a Token

- Create Token
  - Site administration -> Plugins -> Web services -> Manage tokens

Create token

- Token
  - User
    - Search
  - Service
    - 00_MyWebService
  - IP restriction
  - Valid until
    - 5 September 2019

Manage tokens

Any token can be deleted, though you can only view tokens that you created.

<table>
<thead>
<tr>
<th>Token</th>
<th>First name / Last name</th>
<th>Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>11114db6e24ec54598d18686f103485</td>
<td>00_MyWebService User</td>
<td>00_MyWebService</td>
</tr>
</tbody>
</table>
• Using Postman

<table>
<thead>
<tr>
<th>Method</th>
<th>URL</th>
</tr>
</thead>
</table>

**Headers**

- **Content-Type**: application/json

**Body**

```json
"users": [
    {
        "id": 88,
        "username": "jesse.safman",
        "firstname": "Jesse",
        "lastname": "Safman",
        "fullname": "Jesse Safman",
        "department": "",
        "firstaccess": 0,
        "lastaccess": 0
    }
]
```
Expanding your work

- Using The Demo Mobile App + Google Chrome Network Inspector
- https://mobileapp.moodledemo.net/