# **Open Elms API Calls v9**

featuring Open Elms Creator and Open Elms LMS

User Guide

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# **1 About the OPEN ELMS API**

The Open Elms API is a RESTful web service and uses token authenticate 3rd party applications. Before starting to use the Open ELMS API you will need to contact <a href="mailto:support@e-learningwmb.co.uk">support@e-learningwmb.co.uk</a> to obtain a key in order to access this service.

The API enables third party applications to control Open Elms features by communicating between the systems.

The API can be used for a variety of purposes such as the management of users (add/remove/delete), assigning user to learning resources and listing learning resources in the system.

# 2 Response Codes

# **Codes summary**

A summary of HTTP Response Codes returned by the Xero API is shown below.

HTTP Code	Summary	Description
200	ОК	Successful API call.
400	Bad Request	A validation exception has occurred.
401	Unauthorized	Invalid authorization credentials.
404	Not Found	The resource you have specified cannot be found
412	Precondition Failed	One or more conditions given in the request header fields were invalid.
500	Internal Error	An unhandled error. Contact the Open Elms team if problems persist
501	Not Implemented	The method you have called has not been implemented (e.g. POST Organisation)
503	Rate Limit Exceeded	The API rate limit for your organisation/application pairing has been exceeded.

503	Not Available	API is currently unavailable – typically due to
		a scheduled outage – try again soon.

# **3 Authentication**

Access is controlled is token based. The value of the token is configured in Open LMS at System Setup/Defaults/Configuration/APITokenAccess. When calling the API, you need to pass the token value in an HTTP "Authorization" header - the value of the header should be "Basic #####", where ##### is the value of the APITokenAccess configuration option (see screenshot below). A 403 (Forbidden) error will be thrown if authentication fails. Below is a screenshot of a REST API which is used to invoke the API.

METHOD	SCHEME :// HOST [ ":" PORT ] [ PATH [ "?" QUERY ]]		
GET 🔹	http://localhost/o9/backend/users		🛪 Send 👻
	QUERY PARAMETERS		length: 33 byte(s)
HEADERS <sup>③</sup> I <sup>A</sup> <sub>2</sub>		Form 🚽 🖣	▶ BODY <sup>©</sup>
Accept	: application/json	×	XHR does not allow payloads for GET request.
Authorization	: Basic 12345	× &	
+ Add header	Add authorization	Ê	
D			
Response 200 OK			Cather Detected - Euponed Time: 1.81s
-		pretty 🗸 4	Cache Detectes - Espece Time: 1.81s
200 OK	Wed, 29 Jan 2020 21:39:37 GMT -2s Apache/2.4.18 (Ubuntu) CP="Potato"	pretty 🗸 4	> BODY <sup>⊙</sup>
200 OK HEADERS <sup>(1)</sup> Date: Server: P3P: Expires: Cache-Control:	Apache/2.4.18 (Ubuntu) CP="Potato" Thu, 19 Nov 1981 08:52:00 GMT -38 years no-store, no-cache, must-revalidate	pretty 🖌 4	<pre>&gt; BODY © pretty -</pre>
200 OK HEADERS <sup>©</sup> Date: Server: P3P: Expires:	Apache/2.4.18 (Ubuntu) CP="Potato" Thu, 19 Nov 1981 08:52:00 GMT -38 years	pretty 🗸 4	▶ BODY <sup>©</sup>

An example of calling the API with a REST client. The value of the token ('12345') is given in the HTTP Authorization header.

# **4 REST Services**

#### 4.1. Users

#### 4.1.1 List user accounts

URL https://openelms.e-learningwmb.co.uk/{SITE\_ID}/backend/users/{USER\_ID}

Method GET

Description Retrieves a list of user accounts. **{USER\_ID}** is optional - if given, then only the details of the specified account are returned.

Return A list of user accounts, including the following fields:

value

username	Username
employee_id	Employee ID
email	Email address
fname	First name
Iname	Last name
country	Country record
city	City record
company	Company record
department	Department record
location	Location record
job	Job record
groups	A collection of group records
learning	A collection of learning resource records

#### 4.1.2 Search user accounts

- URL https://openelms.e-learningwmb.co.uk/{SITE\_ID}/backend/users/?{FIELD\_NA ME1}={FIELD\_VALUE1}&{FIELD\_NAME2}={FIELD\_VALUE2}..,
- Method GET
- Description Retrieves a list of user accounts which match the given criteria. Currently, the following search fields are supported: fname, Iname, username, usercode, email, company\_id, department\_id, country\_id, city\_id, location\_id, group\_id

#### 4.1.3 Create new user accounts

URL	https://openelms.e-learningwmb.co.uk/{SITE_ID}/backend/users/
Method	POST
Description	Creates a new user account
Form Data	fname, Iname, username, usercode, email, description
Return Value	User id

### 4.1.4 Update user accounts

URL	https://openelms.e-learningwmb.co.uk/{SITE_ID}/backend/users/{USER_ID}
Method	PUT
Description	Updates new user account
Form Data	fname, Iname, username, usercode, email, country_id, city_id, department_id, location_id, company_id, description

## 4.2 Learning resources

## 4.2.1 List learning resources

URL	https://openelms.e-learningwmb.co.uk/ <b>{SITE_ID}</b> /backend/learning/ <b>{LEARNIN</b> G_ID}
Method	GET
Description	List available learning resources. <b>{LEARNING_ID}</b> is optional - if given, then only the details of the specified learning resource are returned. If the learning resource is a SCORM one, then its download link is also returned.
Return value	A list of learning resources, including learning id, name, learning type and an optional download link.

### 4.2.2 Download learning resources

URL	https://openelms.e-learningwmb.co.uk/ <b>{SITE_ID}</b> /backend/learning/download/ <b>{</b> LEARNING_ID}
Method	GET
Description	Downloads a SCORM learning resource. Not that this service only works for e-learning (i.e. SCORM) learning resources.
Return value	The SCORM files compressed in a single ZIP file.

### 4.3 Learning progress

# 4.3.1 Check learning progress

URL https://openelms.e-learningwmb.co.uk/{SITE\_ID}/backend/learning/{LEARNIN G\_ID}/{USER\_ID}

Method	GET
Description	Returns the learning status of the given user for the given learning resource
Return value	JSON array containing the completion status ('not attempted', 'in progress' or 'completed') and numeric score (null if not completed) of the corresponding learning result

### 4.3.2 Update learning progress

URL https://openelms.e-learningwmb.co.uk/{SITE\_ID}/backend/learning/{LEARNIN G\_ID}/{USER\_ID}/{ACTION}/{SCORE}

- Method PUT
- Description Updates the learning status of the given user for the given course. There are two possible updates which are determined by the type of action. If action is 'start', then the learning resource is marked as 'in progress'. If the action is 'complete', then the resource is marked as 'complete'. The score is an option numeric parameter, which is only used for 'complete'.