



CLOUD, LEAN AND COMPLETE LMS WITH AN EMPHASIS ON USABILITY AND EASY COURSE CREATION

TalentLMS-Tin Can Integration

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Introduction to the Tin Can API

The Tin Can API is a brand new learning technology specification, offering a simpler and more flexible way of capturing learning activities, and sharing them to a variety of other systems.

It is a product of SCORM evolution - practically the next generation of SCORM - eliminating many of the old limitations and restrictions.

Suitable for use in any kind of learning, online or offline, as well as in games, surveys or even real world activities.

To make it short, the Tin Can API uses (JSON formatted) statements containing any activity needs to be recorded, and sends them to a Learning Record Store (LRS). Each statement uses this simple form: "Actor, verb, object" or "I did this".

The main benefit of the Tin Can API is that it frees your data from a pre-defined LMS, promoting mobile, offline or even social learning.

For more information about the Tin Can API you can visit <http://tincanapi.com>

Tin Can Statements

Statements are the substance of the Tin Can API. Each statement corresponds to an experience that has occurred or is taking place right now. As mentioned, the simplest form of a Tin Can statement is "Someone Did Something" or "[actor] [verb] [object]" in general. Using JSON format, a simple example of a Tin Can statement could be:

```
{
  "actor": "John",
  "verb": "experienced",
  "object": "Programming Techniques"
}
```

Of course, this is the simplest of the examples. Each statement field can expand so that it includes all the information needed to consider the activity complete.

Additionally, all info sent, can be provided in more than one language, so that the activity is displayed in the desired language when possible. Let's have a look at a more realistic example:

```

{
  "id" : "fakfc918-b077-9s0a-a0a5-a4c323918ce0",
  "actor": {
    "name": "John Doe",
    "mbox": "mailto:jd@example.com"
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/completed",
    "display": {
      "en-US": "completed",
      "el-GR": "ολοκλήρωσε"
    }
  },
  "object": {
    "id": "http://example.com/activities/javatest",
    "definition": {
      "name": {
        "en-US": "Java Test",
        "el-GR": "Διαγώνισμα Java"
      }
    }
  }
}

```

For an extended overview about Tin Can Statements you can visit <http://tincanapi.com/developers/tech-overview/statements-101/>

Integrating with TalentLMS

TalentLMS offers a basic LRS implementation, where you can send and record any learning experience. You can enable Tin Can API for your domain, through the Basic Settings of your account (administrators only).

Once enabled, you can get your private key used for authentication when communicating with the LRS.

Statements can be sent to the LRS by posting them to the following URL: <http://yourdomain.talentlms.com/tcapi/>. If authenticated successfully and provided

that your JSON statement is valid, the activity will be recorded and displayed in your timeline – in any other case a descriptive error will be returned.

Besides posting your statements, you should include the following parameters in the request HTTP header:

- Authorization: your Tin Can API Key (find it in the Basic Settings of your account).
- statementId: (optional) A unique identifier of your statement.

(* Note: when a statement id is not included, a POST request should be made. On the other hand, when a statement id is sent, a PUT request should be used)

Real usage scenario with PHP

Here is a basic example communicating with the LRS, using PHP and PHP's cURL library. All you need to provide is the endpoint url, the authorization key, and a valid json statement.

```
function postToLRS($endpoint_url, $statement_json, $authkey) {

$ch = curl_init();
    curl_setopt($ch, CURLOPT_HTTPHEADER, array('Content-Type:
application/json', 'Authorization: '.$authkey, 'X-Experience-API-Version:
0.95'));
    curl_setopt($ch, CURLOPT_HEADER, false);
    curl_setopt($ch, CURLOPT_POST, true);
    curl_setopt($ch, CURLOPT_URL, $endpoint_url);
    curl_setopt($ch, CURLOPT_RETURNTRANSFER, 1);
    curl_setopt($ch, CURLOPT_SSL_VERIFYPEER, false);
    curl_setopt($ch, CURLOPT_COOKIEJAR, 'aCookie');
    curl_setopt($ch, CURLOPT_COOKIEFILE, 'aCookie');
    curl_setopt($ch, CURLOPT_FOLLOWLOCATION, TRUE);
    curl_setopt($ch, CURLOPT_VERBOSE, TRUE);
    curl_setopt($ch, CURLOPT_POSTFIELDS, $statement_json);

$response = curl_exec($ch);

    curl_close($ch);

    echo $response;
}
```

Tin Can in action

TalentLMS

At <http://yourdomain.talentlms.com/dev/tincan/> you can find an example activity, where you can see in action how it communicates with the TalentLMS LRS. Fill in the LRS endpoint URL, your secret Tin Can Api key and the email of an existing user in your system. Start navigating through the sample course, and check in real time the statements recorded in your timeline.

SCORM Cloud

In the same example activity you may also use an alternative LRS, such as the public LRS provided by SCORM Cloud. Use the public endpoint <https://cloud.scorm.com/ScormEngineInterface/TCAPI/public/>, enter a random Api Key and your email. Navigate through the course, and visit <http://tincanapi.com/developers/resources/statement-viewer/> to see all statements that were recorded.

Run it on your own

You may also download this sample activity, which is located at <http://yourdomain.talentlms.com/dev/tincan.zip>. You just unzip the files, place them in a web server running php, and you are ready to go.

Importing Tin Can Storyline object in TalentLMS

Using Articulate Storyline you can publish a project that supports Tin Can API, ready to use in conjunction with an LRS. Publishing for Tin Can API in Articulate Storyline is really easy: just select "Tin Can API" as LMS in the Output Options section (detailed instructions [here](#)).

TalentLMS offers you the ability to upload Storyline objects which were published for Tin Can, directly into a course unit. Just select the option to create a SCORM/Tin Can unit, upload your Storyline zipped object, and save your unit. Start experiencing your new unit and all Tin Can statements produced will be recorded and displayed to your timeline.