

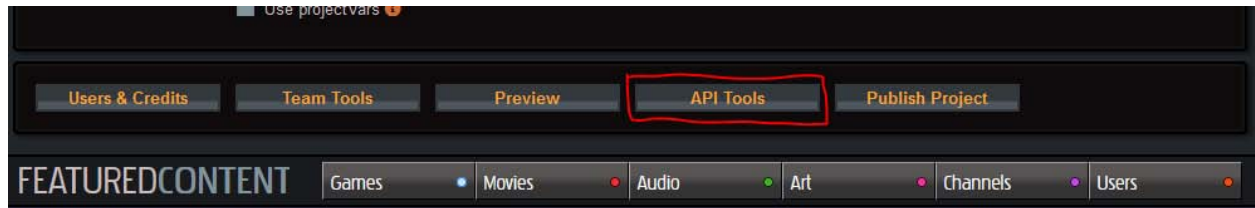
The Newgrounds API in Clickteam Fusion 2.5

By Toby Davis

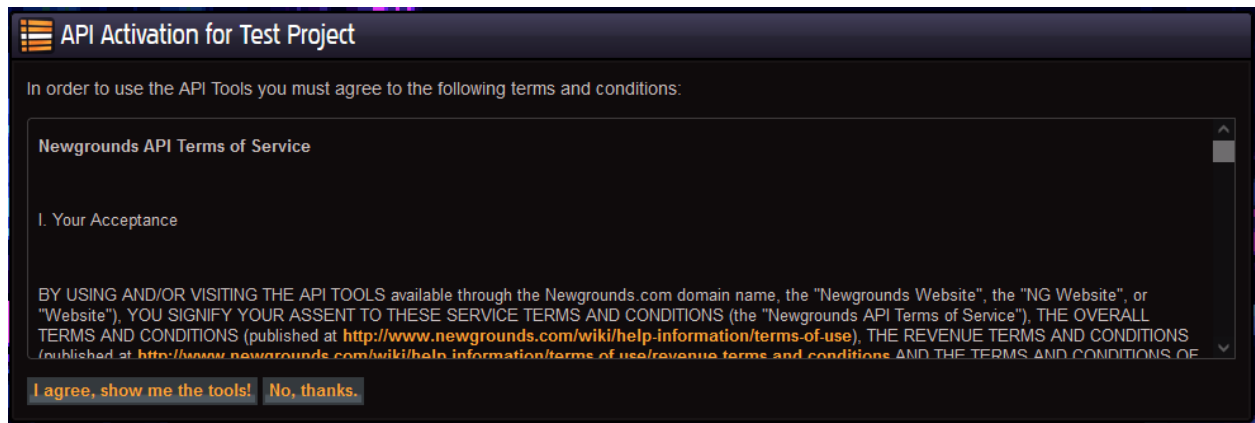
Newgrounds API JavaScript library by KilledByAPixel

Setting Things Up

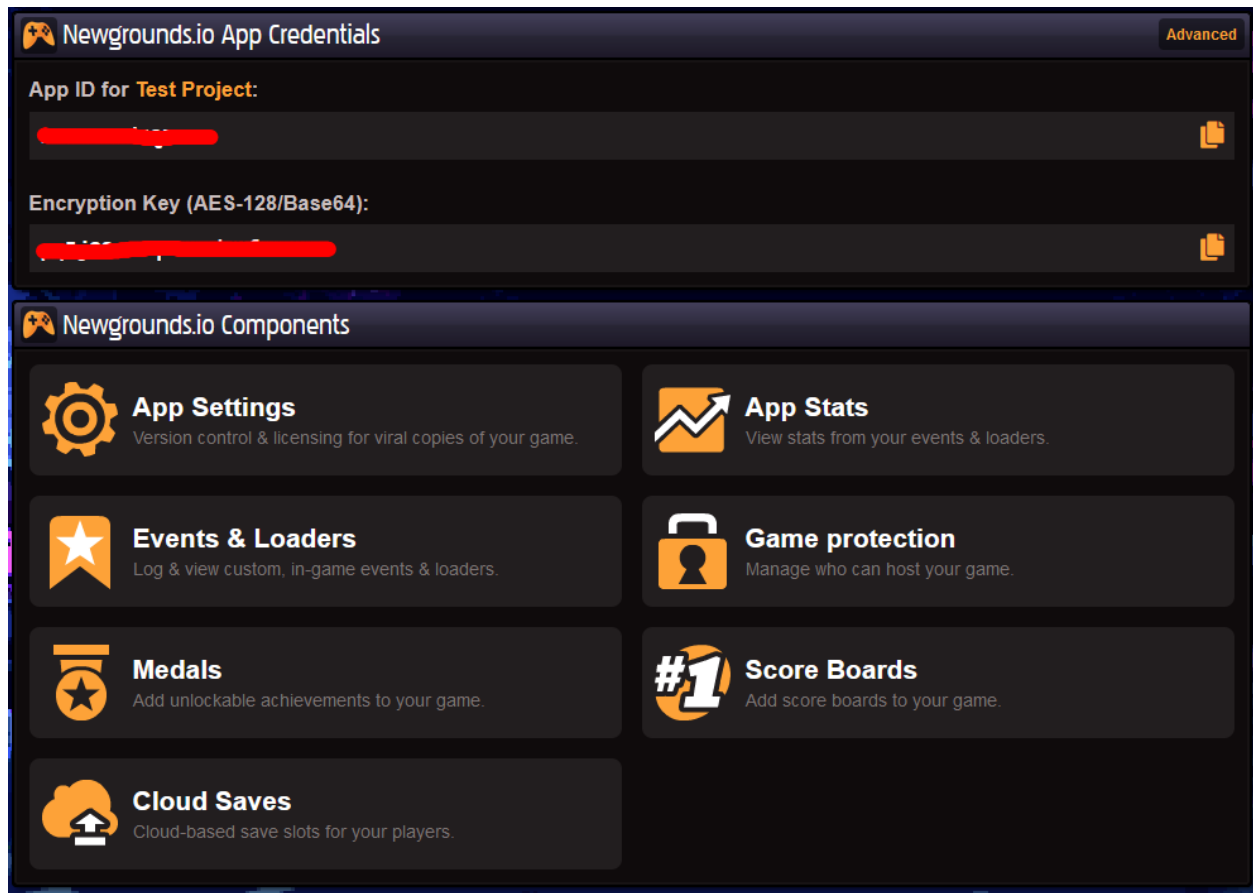
Go to Newgrounds.com and create a new game project. Scroll to the bottom of the window and click the “API Tools” button. Be sure that you have given your project a name before you click the button.



You will then need to agree to the Newgrounds API Terms of Service.



Now you will be in the API tools dashboard. This is where you will find your App ID, Encryption Key, and other useful tools like the Medals and App Settings menu. Take note of your App ID and Encryption Key, because you will need them for the upcoming steps. The Encryption Key uses AES-128/Base64 encryption by default, but if it isn't set to that for some reason, then you will need to go into the “Advanced” menu and change it to AES-128/Base64 encryption.



Important Note

In order to test anything API-related, you must upload your game to Newgrounds and test it using the "Preview" button. See the "Testing the API in your Game" section for more info.

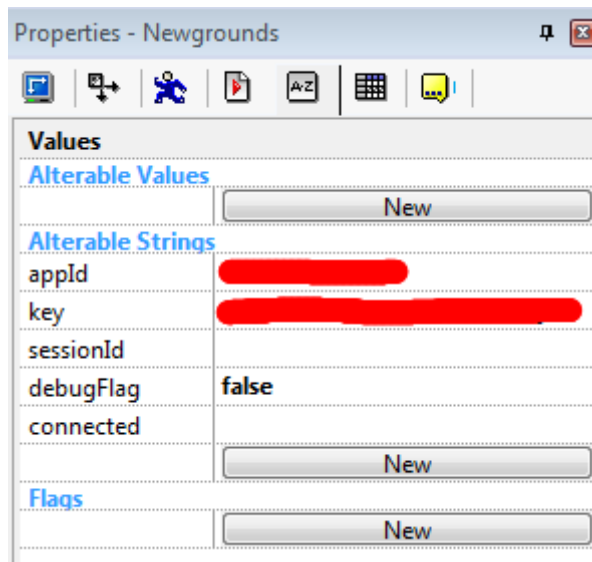
External Newgrounds.js File

Everything API related is handled by an external file called Newgrounds.js. This was created by KilledByAPixel for the purpose of interacting with the Newgrounds API. With the use of Fusion 2.5's HTML5 object, we can call commands present in this JavaScript file in order to do things like unlock medals. You will need to bundle this with your game files.

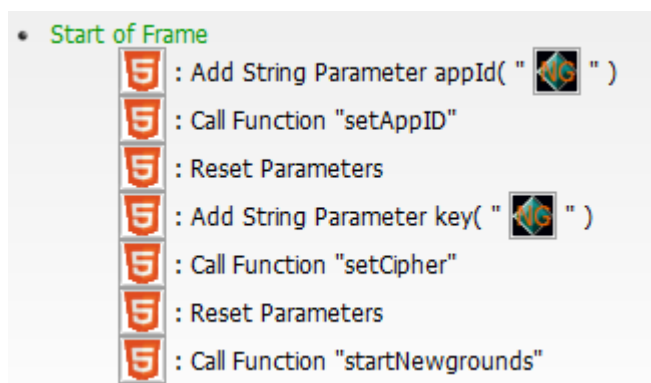
Connecting to the API

First, make sure that you have your build type set to "HTML5 Final Project". Next, you will need to add the HTML5 object to your frame and an active object that we are going to rename to "Newgrounds". Inside of the Newgrounds object, create 2 Alterable Strings called "appId" and "key" (minus the quotes). Copy and paste your App ID from the "Newgrounds.io App

Credentials” section of the API tools page on Newgrounds and paste it into the value for “appId”. Do the same for your Encryption Key by copying it into the value for “key”.



In order to establish a connection to the API, you will need to create a “Start of Frame” event, and add the following actions:

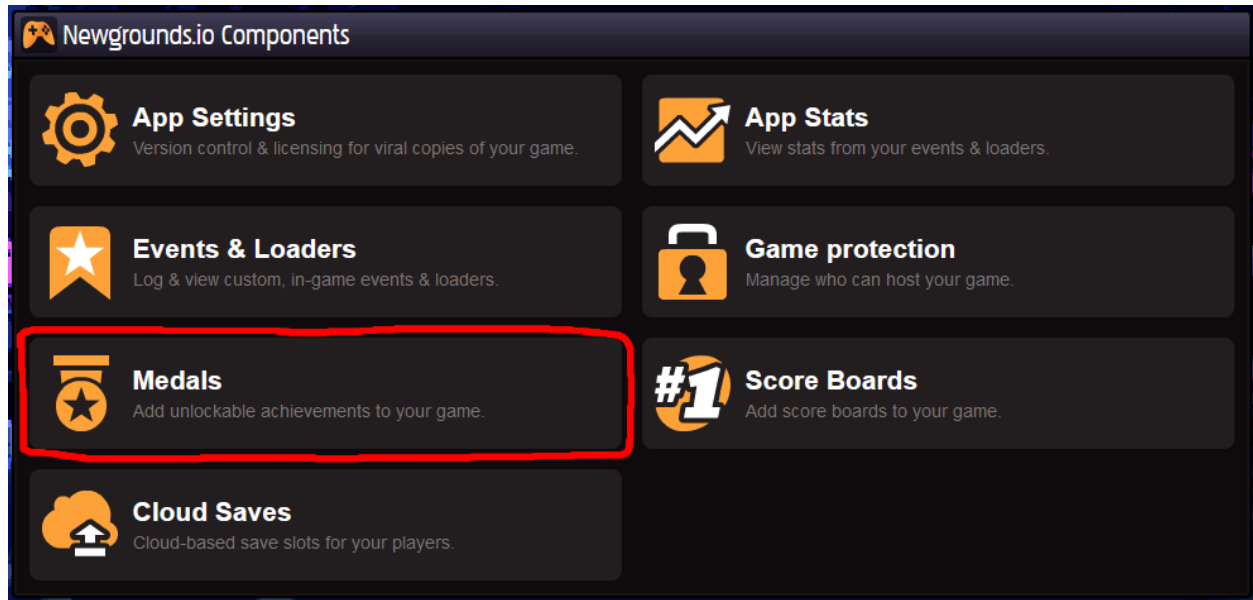


These actions feed the App ID and Encryption Key that you copied into the Newgrounds object earlier into the code that is executed inside the external **Newgrounds.js** file. They then use that information to initialize the API.

All of these actions can be found in the HTML5 Object’s “JavaScript” submenu. Some functions, like setAppID and setCipher, require parameters, which act as additional information that can be used in code. Each parameter’s type has to match the value type it is stored as in the Newgrounds object. For example, since the “appId” value in the Newgrounds object is a string, we have to add it to the HTML5 Object as a String Parameter. Parameters must be added *before* a function is called, and must be reset before a different function is called, otherwise the wrong parameters may be passed into the function.

Medals

In order to unlock any medals, we will actually need medals to unlock. Go to the “Newgrounds.io Components” section of the API Tools page and click on “Medals”.

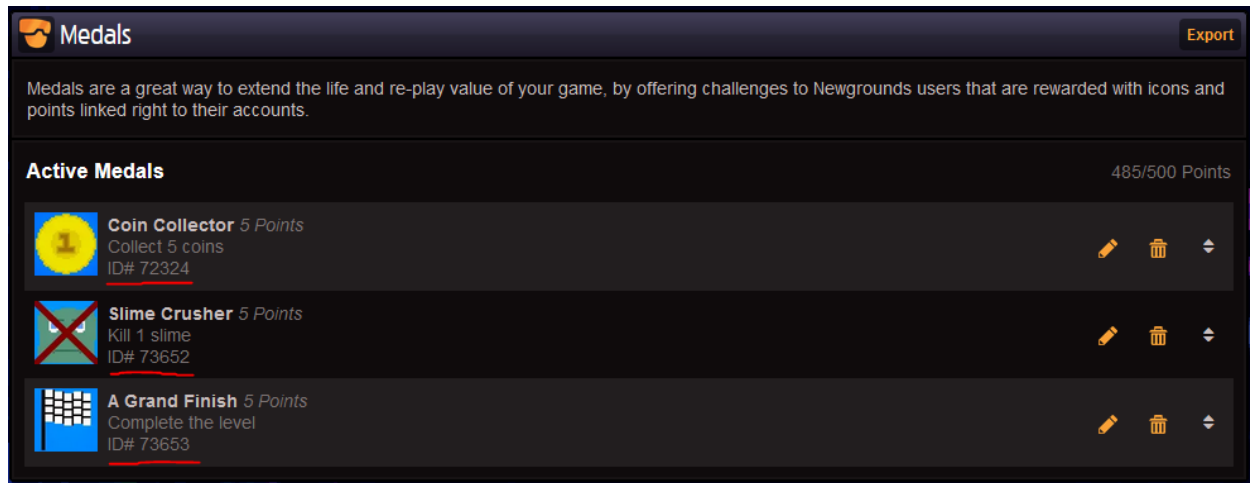


On this page you can create new medals. You will need to provide an icon (in 100x100 resolution), medal name, description, and difficulty. When you are done, click “Save Medal”. Before the medal can go live, you will need to test your game and unlock it (more on this in the “Testing the API in your Game” section).

A screenshot of the 'Add New Medal' form. The form is titled 'Add New Medal' and includes several input fields: 'Upload Icon:' with a dashed box for a 100x100px recommended image; 'Medal Name:' with a text input field; 'Description:' with a text input field; 'Difficulty:' with a dropdown menu currently set to 'Easy (5 points)'; 'Secret Medal?' with a dropdown menu currently set to 'No'; and an 'All Done?' section with a 'Save Medal' button.

Unlocking Medals

All of your medals have a unique ID assigned to them when they are created. Once they have been created, they are added to the “Active Medals” list, which is right above the “Add New Medal” section on the “Medals” page.



Before you call the **unlockMedal** function in Fusion, be sure to set an integer parameter with the ID of the medal you wish to unlock. Also, be sure that you set up your conditions in a way so that your medal unlock request is only executed once, because if you spam the API server, you may be temporarily blocked from accessing it by Newgrounds’ spam protection.

- Coins of  ≥ 5
- + Only one action when event loops
 -  : Reset Parameters
 -  : Add Integer Parameter 72324
 -  : Call Function "unlockMedal"
 -  : Reset Parameters

Modification of Index.html

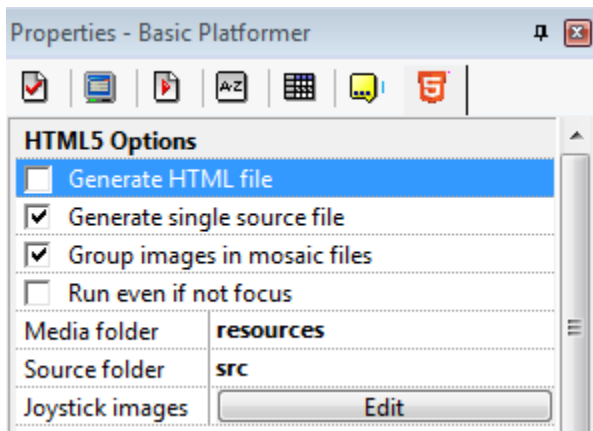
In order for the game to interact with the API, you will need to modify the **index.html** file that was generated when you built your game. All of the necessary code can be found in the included “**code insert.html**” file. Open that up, copy it, and then paste it right below “**<script src=**”src/Runtime.js”**></script>**” in your **index.html** file.

```

41 <title>Newgrounds API Example</title>
42
43 <script>
44     // Detection of old browsers that do not support the canvas element
45     // Falls back to a default page
46     if (!document.createElement("canvas").getContext)
47     {
48         window.open("http://www.clickteam.com/html5-fallback", "_self");
49     }
50 </script>
51
52
53 <!-- EXTRASOURCES -->
54 <!-- Loads the Javascript code...-->
55 <script src="src/Runtime.js"></script>
56
57 <script>
58
59     // Detection of when the html file is ran locally.

```

After adding this code, you may want to disable the “Generate HTML file” option in Fusion 2.5 in order to prevent your index.html file from being overwritten.



Packaging and Uploading Game Files

In order to upload your HTML5 game to Newgrounds, you will have to build your game and package all of the exported files into a ZIP folder. Make sure that you zip up the exported files themselves, and not the entire folder they are contained in (be sure to zip the *src* and *resource* folders as they are though). Additionally, you will need to include the Newgrounds.js file that came with this documentation. Add it to the ZIP folder in the main directory (the one that contains the index.html file). Once the files have been packaged into a ZIP folder, you can upload it to Newgrounds via your project page.

Details for Newgrounds API Example for Clickteam Fusion 2.5

NOTICE: if your work contains unlicensed music, it will be removed. Please see our [Royalty Free Music resource page!](#)

This information is required.

Title:

Short Description:

Submission File(s):

Upload File

Flash Game (swf) up to 250 MB

HTML5 Archive (zip) up to 1,000 MB

BasicPlatformer.zip

Embed Width: px

Embed Height: px

☐ Touchscreen friendly

☐ Supports gamepads

☐ Enable iFrame scrolling

☐ Uses SharedArrayBuffer/Cross Origin Isolation

[Preview](#) | [Delete](#)

just now | 173.51KB | [Ready to be Published](#)

You have updates that haven't been published yet. Check the [preview](#) if you need to test them first!

Once your file has been uploaded, you need to change the “Embed Width” and “Embed Height” to match the dimensions of your game. After that, you can begin testing your game.

Testing the API in your Game

You must test the medals that you add to your game, which you can do by clicking the “Preview” button on your file upload or at the bottom of your project page.

BasicPlatformer.zip

Embed Width: px

Embed Height: px

☐ Touchscreen friendly

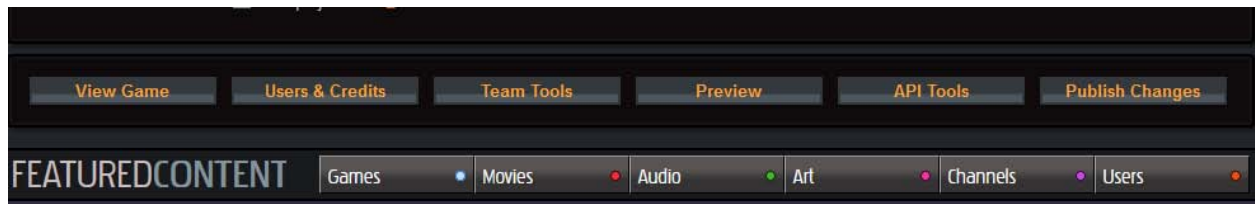
☐ Supports gamepads

☐ Enable iFrame scrolling

☐ Uses SharedArrayBuffer/Cross Origin Isolation

[Preview](#) | [Delete](#)

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You can now test your game and medals in preview mode. You will need to refresh the page in order to see the new updated status of any medals that you unlocked during your play session.



Once you are satisfied with your game, you can click the “Publish Project” button at the bottom of your project page.

