Sanside
四川三思德科技

Sanside Technology Facebook Integration v2.0

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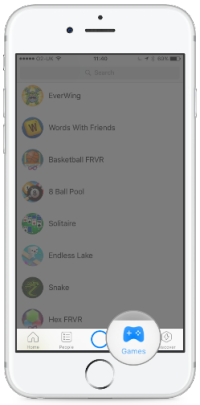
Instant

Powered by HTML5 technology, Instant Games are quick to load and natively cross-platform. Deploy once, and reach users where they are, on iOS, Android or Desktop.



Discoverable

Whether people are in conversations or scrolling through the news feed, they can always jump into a game.

Engaging

Our SDK provides capabilities for building custom updates into chats, sharing flows and even Messenger bots. All of these will enable you to provide the best re-engagement exerience for players.

A definitive guide to integrating **Facebook Instant Games** with pre-made HTML5 mobile creations

1 Abstract

Facebook integration is an important step to successfully expand the company's market from local Chinese applications to the global scale. Therefore, being able to adapt pre-made games into a Facebook Instant Games format is relevant in globalizing the production of the HuHuGame division. This document should be used for learning and also referencing necessary information to turn an HTML5 game into a Facebook Instant Game. By the end of the document, the reader should be able to:

1. Integrate the Facebook SDK into the game files
2. Create an application slot to insert the game into as a Facebook Developer
3. Traverse around the Facebook Business pages
4. Upload and update your game with new versions
5. Insert advertisements into the game
6. Use Facebook Analytics to gain data about your game
7. Send the game into review to be pushed towards the open market

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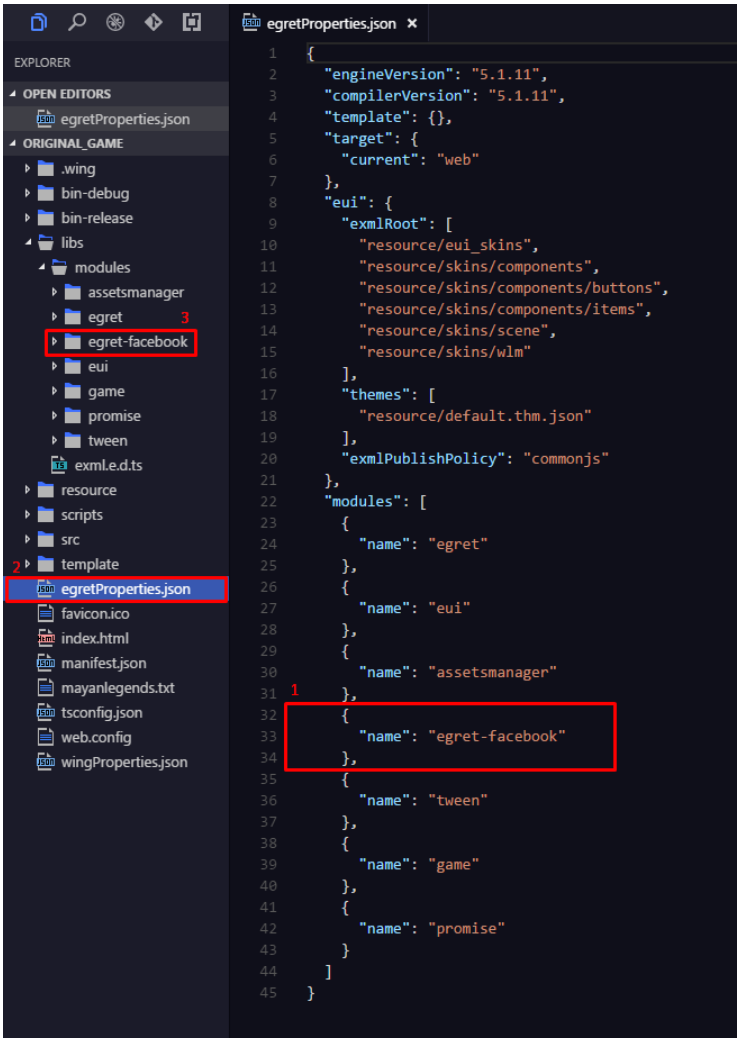
2 Facebook SDK Integration

2.1 Inserting the SDK

The first step in integrating your mobile game with Facebook is to insert the Facebook SDK into your index.html file in order to load up the Facebook Instant Games SDK. This is done by inserting this line of code. It should be the first piece of code after the <body> tag:

```
<body>
    <script src="https://connect.facebook.net/en_US/fbinstant.6.0.js"></script>
```

Then, in order to be able to use Facebook's pre-made functions across any file, the SDK must be loaded into the egretProperties.json file. This allows the Egret Engine to use the function names within any javascript or typescript file.



1. The code that needs to be added to the file
2. The file location that it needs to be added to
3. The folder that is created after the project is built correctly

2.2 Instant Games API Functions

After the above code is added to the game, FBInstant functions can be used across any file to call functions and get information. The following link shows the entire library of functions that can be used in the future.

Facebook Instant Games API Reference 6.1

We will focus on three in particular:
FBInstant.initializeAsync() | FBInstant.setLoadingProgress() | FBInstant.startGameAsync()

2.2.1 FBInstant.initializeAsync()

This function initializes the SDK, in order for it to work. It is necessary to put this function before any other FBInstant functions for them to work.

2.2.2 FBInstant.setLoadingProgress()

When starting up a Messenger game, Facebook integrates its own loading system to use. To allow it to show correctly, the programmer should update this function with each asset as it is loaded, from a percentage of total assets. This way the user knows what percentage of the game is loaded and when it is fully loaded in order to play it.

2.2.3 FBInstant.startGameAsync()

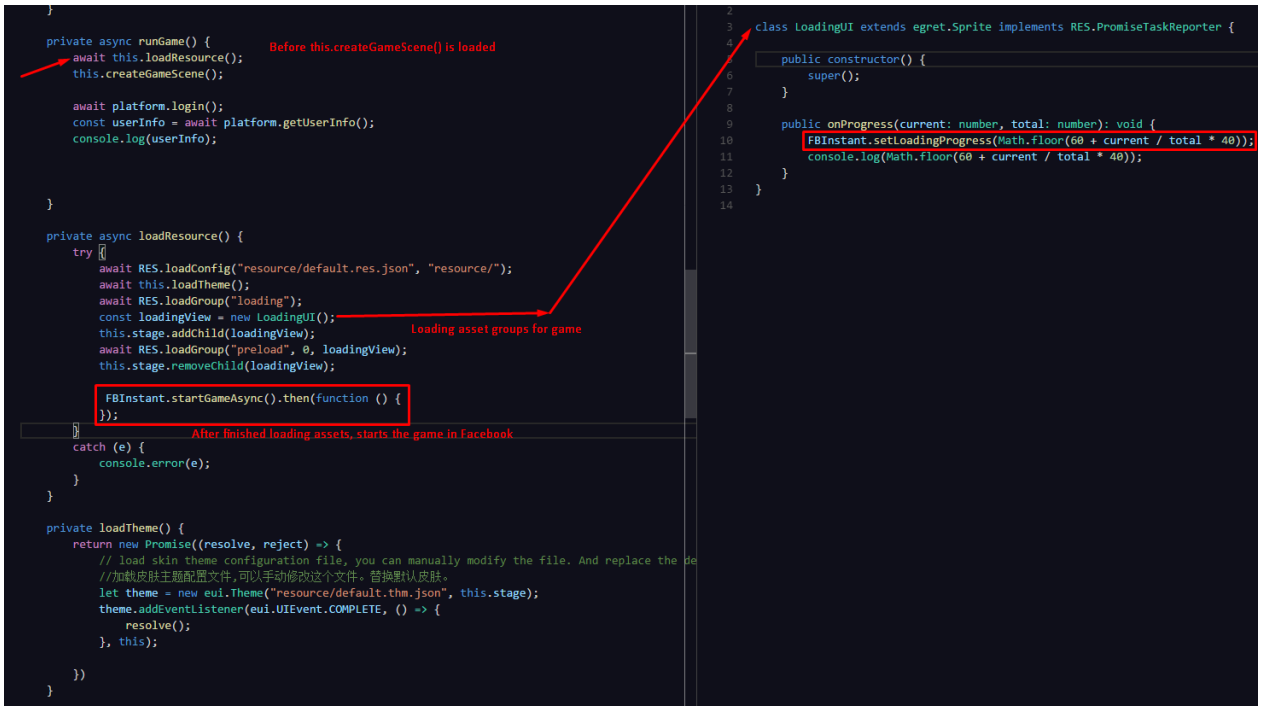
This function tells Messenger to remove the loading screen from the main interface and load up the game. In the case of egret, this function should come right before the GameScene is created.

2.2.4 Example

```
    <script src="https://connect.facebook.net/en_US/fbinstant.6.0.js"></script>
    <div style="margin: auto;width: 100%;height: 100%;" class="egret-player" dat
data-content-width="640" data-content-height="960" data-multi-fingered="2" data-
</div>
<script>
    //Initialize through facebook Instant Games SDK
    FBInstant.initializeAsync().then(function () {

        var locale = FBInstant.getLocale();
        var platform = FBInstant.getPlatform();
        var sdkVersion = FBInstant.getSDKVersion();
        var playID = FBInstant.player.getID();
        console.log(locale + "," + platform + "," + sdkVersion + "," + playID)
    });
```

```
//Creates a single script object onto the HTML page
var loadSingleScript = function (src, callback) {
    var s = document.createElement('script');
    s.async = false;
    s.src = src;
    s.addEventListener('load', function () {
        s.parentNode.removeChild(s);
        s.removeEventListener('load', arguments.callee, false);
        callback();
    }, false);
    document.body.appendChild(s);
};

//Loads all scripts into the HTML page
var loadScript = function (list, callback) {
    var loaded = 0;
    var loadNext = function () {
        loadSingleScript(list[loaded], function () {
            loaded++;
            //Sets the loading percentage for Messenger based on total files loaded
            FBInstant.setLoadingProgress((loaded / list.length) * 60);
            console.log(Math.floor(loaded / list.length * 60))
            if (loaded >= list.length) {
                callback();
            }
            else {
                loadNext();
            }
        })
    };
    loadNext();
};

//Receives the manifest.json file to load which contains all files
var xhr = new XMLHttpRequest();
xhr.open('GET', './manifest.json?v=' + Math.random(), true);
xhr.addEventListener("load", function () {
    var manifest = JSON.parse(xhr.response);
    var list = manifest.initial.concat(manifest.game);
    loadScript(list, function () {
```

Index.html



Main.ts

3 Facebook Application Creation Process

After the game is set up and ready to be uploaded onto the Facebook platform, an application slot must be created for it within the Facebook Business website. Follow this guide for a brief explanation on how to navigate around, however the website itself can be accessed in Chinese for easier navigating.

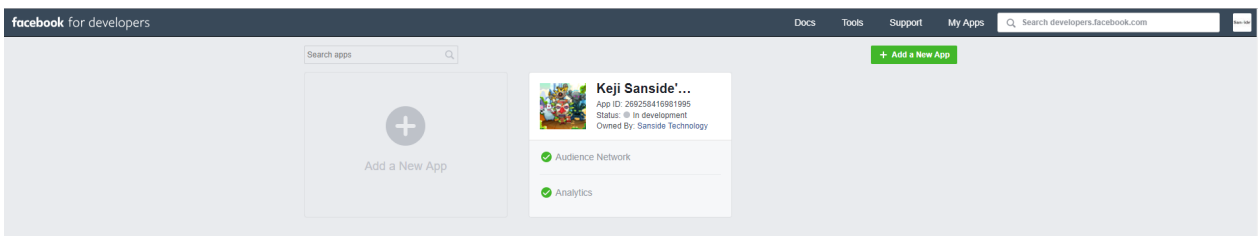
Facebook Business Website

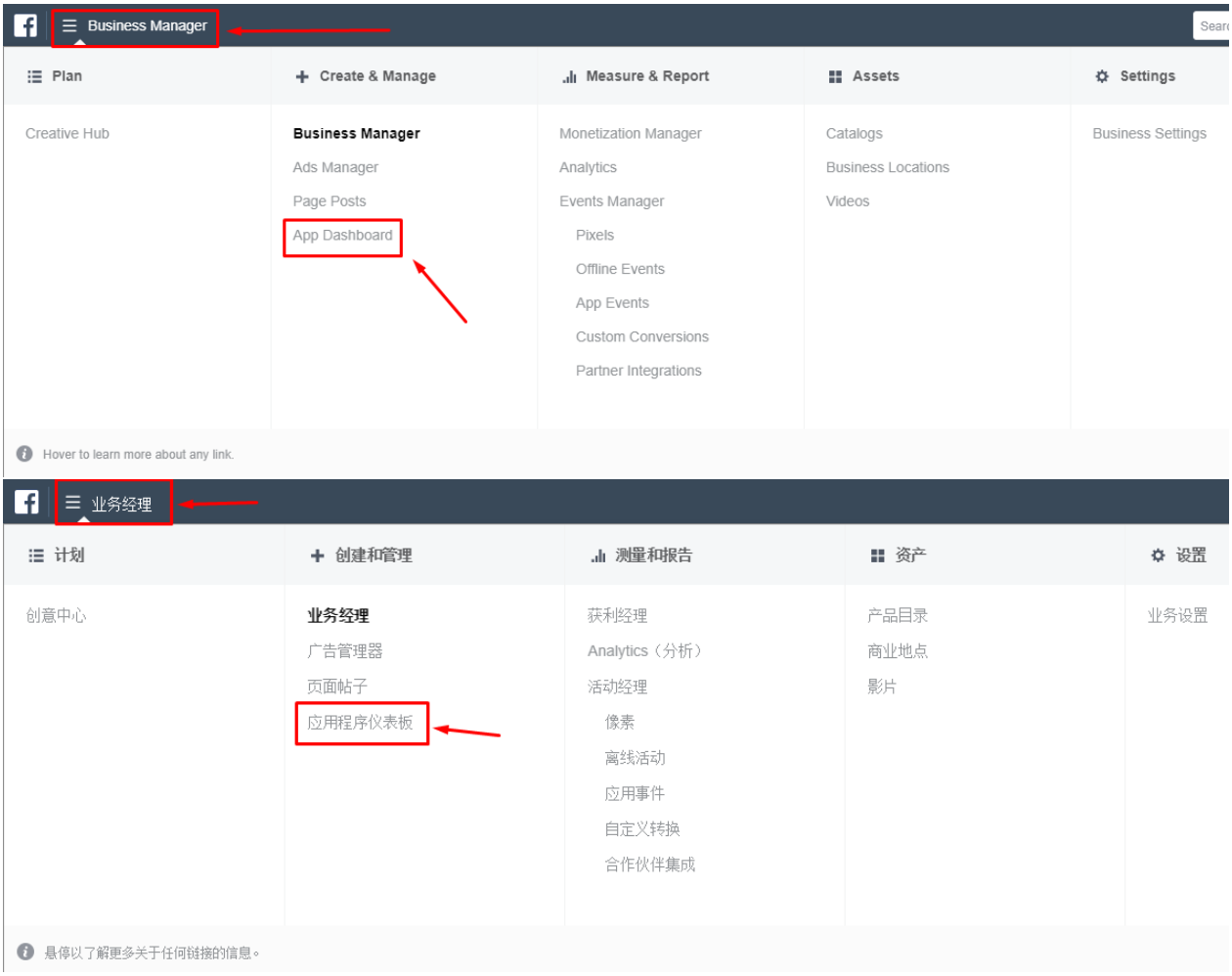
Username:	sansidekeji@outlook.com
Password:	Maxing2018yes

Table 1: Facebook Login Credentials

3.1 Navigation

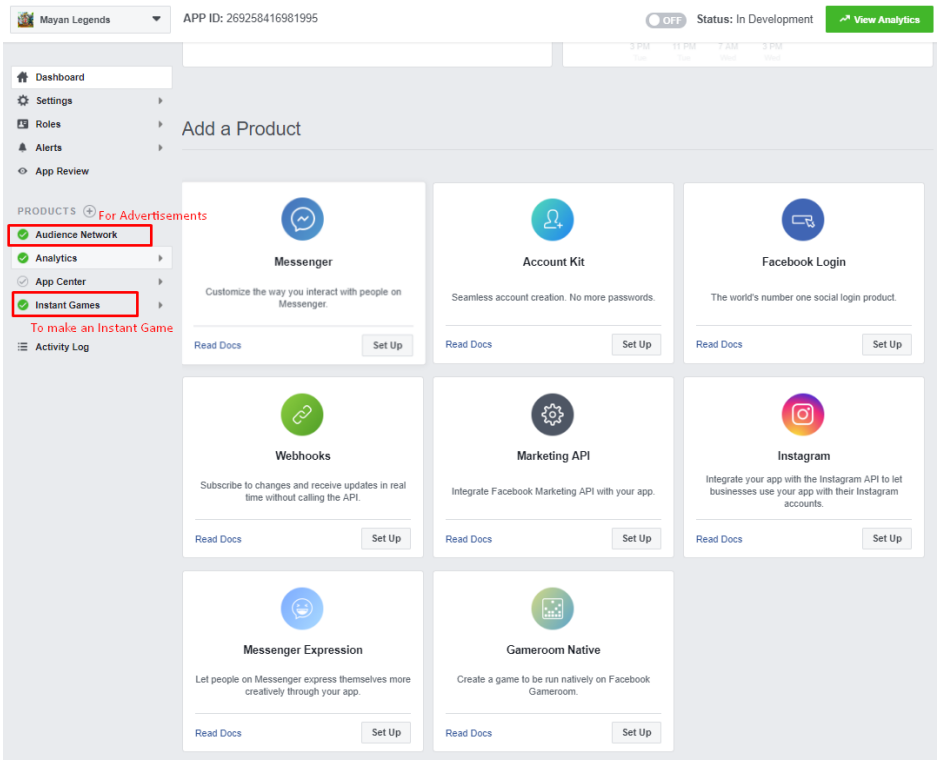
After logging into the website, locate the App Dashboard menu under the options. Here you can see a page for all of your Instant Games applications on one screen and click on each for more information about them.




Business Manager
Plan
Create & Manage
Measure & Report
Assets
Settings
Creative Hub
Business Manager
Ads Manager
Page Posts
App Dashboard
Monetization Manager
Analytics
Events Manager
Pixels
Offline Events
App Events
Custom Conversions
Partner Integrations
Catalogs
Business Locations
Videos
Business Settings
Hover to learn more about any link.
业务经理
计划
创建和管理
测量和报告
资产
设置
创意中心
业务经理
广告管理器
页面帖子
应用程序仪表板
获利经理
Analytics（分析）
活动经理
像素
离线活动
应用事件
自定义转换
合作伙伴集成
产品目录
商业地点
影片
业务设置
悬停以了解更多关于任何链接的信息。

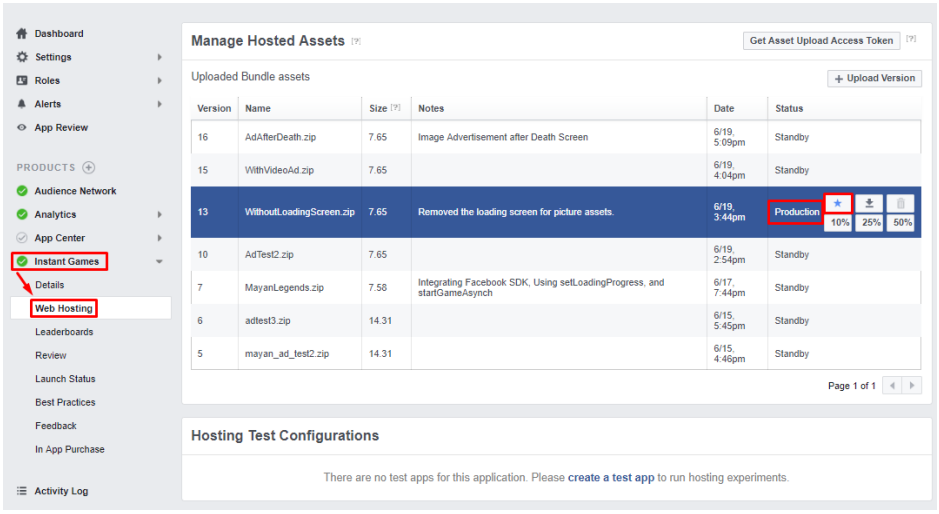
3.2 Creating the Game

When creating a new application, make sure to select "Audience Network" in order to be able to show advertisements and "Instant Games" to make it compatible with Facebook Instant Games. The other Product Options can also be added as needed including analytics, App Center, and Instagram API.



3.3 Uploading the Game

Finally, in order to upload your game, after adding the Instant Games product, go to Web Hosting and upload your game folder. In order to upload, the file must be zipped (.zip). Then, once it uploads and is scanned by Facebook it can be pushed to production by click on the star.

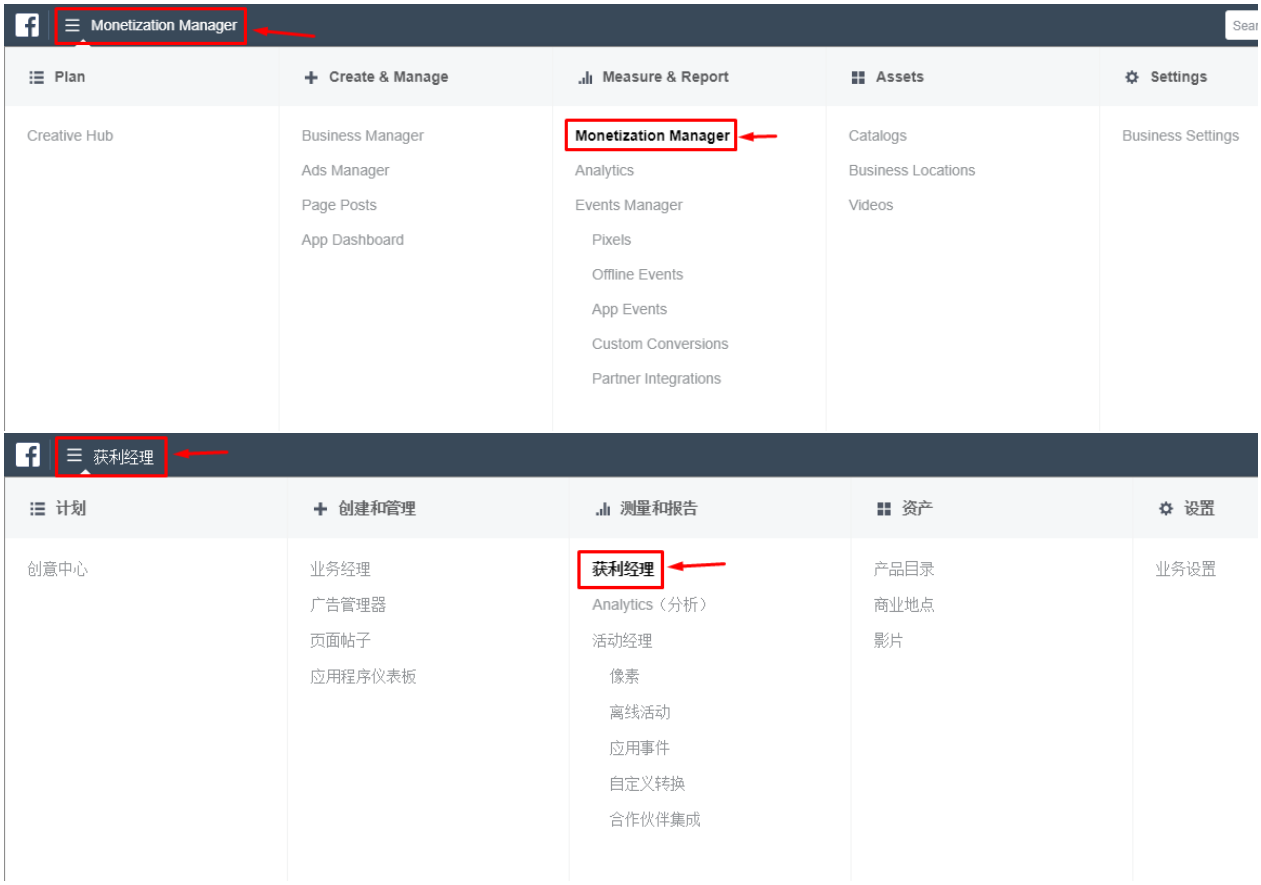


4 Advertisements

In order to make applications profitable, advertisements can be added to the game. Facebook allows developers to use its database of advertisements to show the user under the condition that the application gets approved by Facebook to be able to show advertisements. After a game is ready to be released, it should be sent to Facebook for approval to place into the market for advertisements to show up in the published game.

4.1 Audience Network

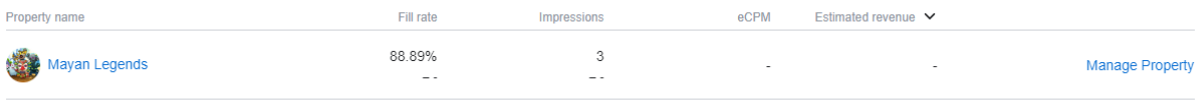
This database of advertisements is called the "Audience Network". Therefore, in order to have ads in your game, your game must be set up with an audience network. In order to create an advertisement placement in your game, your game must first be connected to an Audience Network when made (see Creating the Game).



The Audience Network is further split into Property, Platform, and Placement.

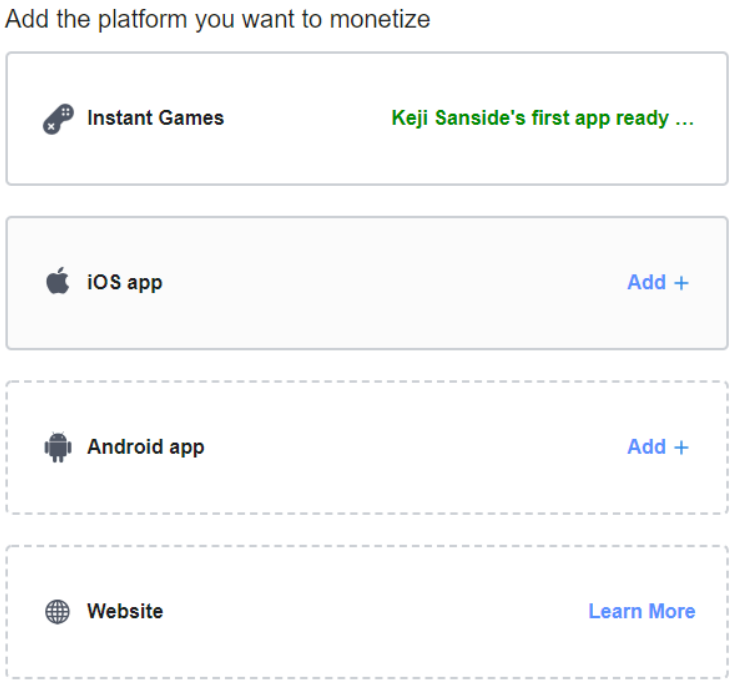
4.1.1 Property

This is the highest level of the audience network. A property is the same idea as a product, for instance one game that the company has made. Click on "Create A Property" to add a new product under the Audience Network



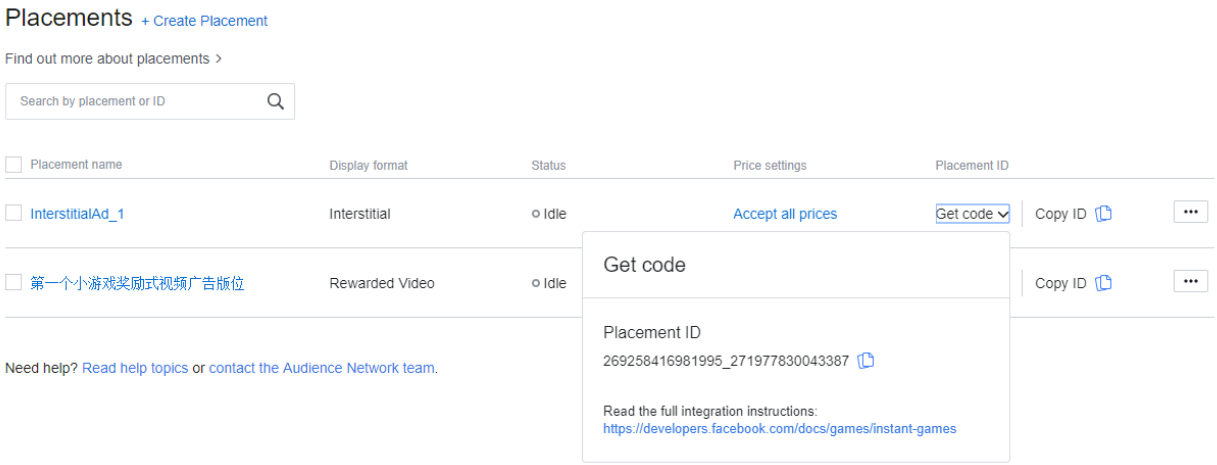
4.1.2 Platform

The platform is a sub-level of a property. Under a property, an application can have multiple different types of platforms: Android, Web, iOS, Instant Games. Each of these can have their own settings. For now, just use Instant Games for the HuHuGame platform.



4.1.3 Placement

A placement is the lowest level of the audience network. It is the same as having a spot to put your advertisement in your application. Each application can have a maximum of 4 different advertisements. For Instant Games, these can be interstitial or video ads. Furthermore, each advertisement is given a unique code which is later necessary for use when adding the code for advertisements to show in the application.



4.2 Interstitial and Video Ads

There are two types of ads that can be added into an Instant Game, interstitial ads and video ads. Each has their own calling functions that are slightly different. Still, each ad can be integrated very easily by using Facebook's integrated functions. The long string of numbers within the FBInstant.getAdAsync() function is a unique number that can be found on the audience network page for each game. Facebook allows for a maximum of 4 different kinds of advertisements within one Instant Game.

```
FBInstant.getInterstitialAdAsync(
'269258416981995_271977830043387',
```

Facebook Instant Games API Advertisements Reference 6.1

4.2.1 Interstitial Ads

Interstitial ads are full page images that appear across the entire device screen.These can be called using the following function:

```
var imageAd = function () {
            FBInstant.getInterstitialAdAsync(
            '269258416981995_271977830043387',
        ).then(function (interstitial) {
            console.log("Ad Loaded");
            this.ad = interstitial;
            return this.ad.loadAsync();
            //Ad loaded
        }).then(function () {
            this.ad.showAsync();
            // Ad shown
            console.log("Ad Shown");
        });
};
```

4.2.2 Video Ads

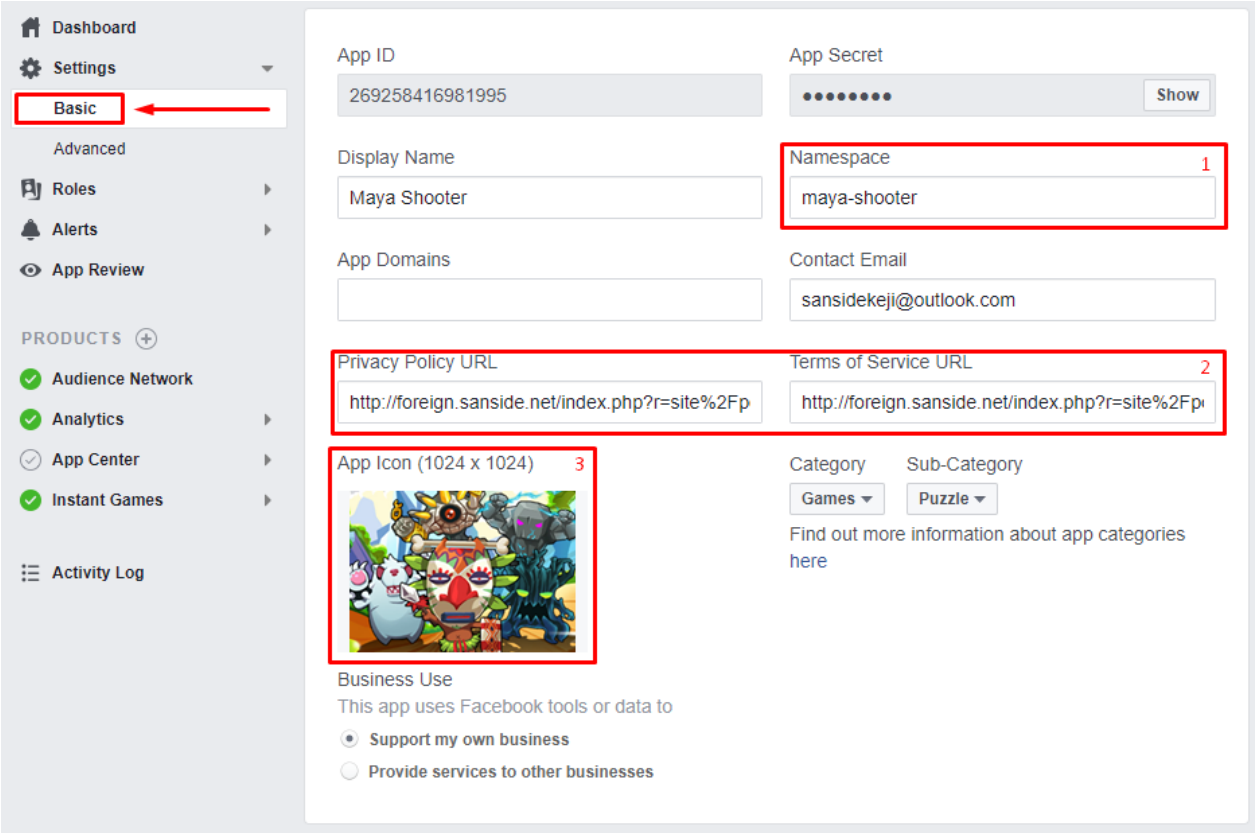
Interstitial ads are full page videos that play across the entire device screen. These can be called using the following function. They can also be checked to see if the video was watched through entirely or stopped before completion:

```
var videoAd = function() {
    var ad = null
    FBInstant.getRewardedVideoAsync(
    '269258416981995_269832970257873',
    ).then(function(rewardedVideo) {
    ad = rewardedVideo;
    return ad.loadAsync();
    }).then(function() {
    // Ad loaded
    return ad.showAsync();
    }).then(function() {
    // Ad watched
    });
};
```

5 Getting Ready for Review

5.1 Basic Information

After creating the application, writing all the code, and implementing advertisements there are multiple different files and items that need to be created before being able to send the application into review. Mostly, this includes linking the privacy policy to the game, as well as, uploading some images and a video to show how the game looks like to users.

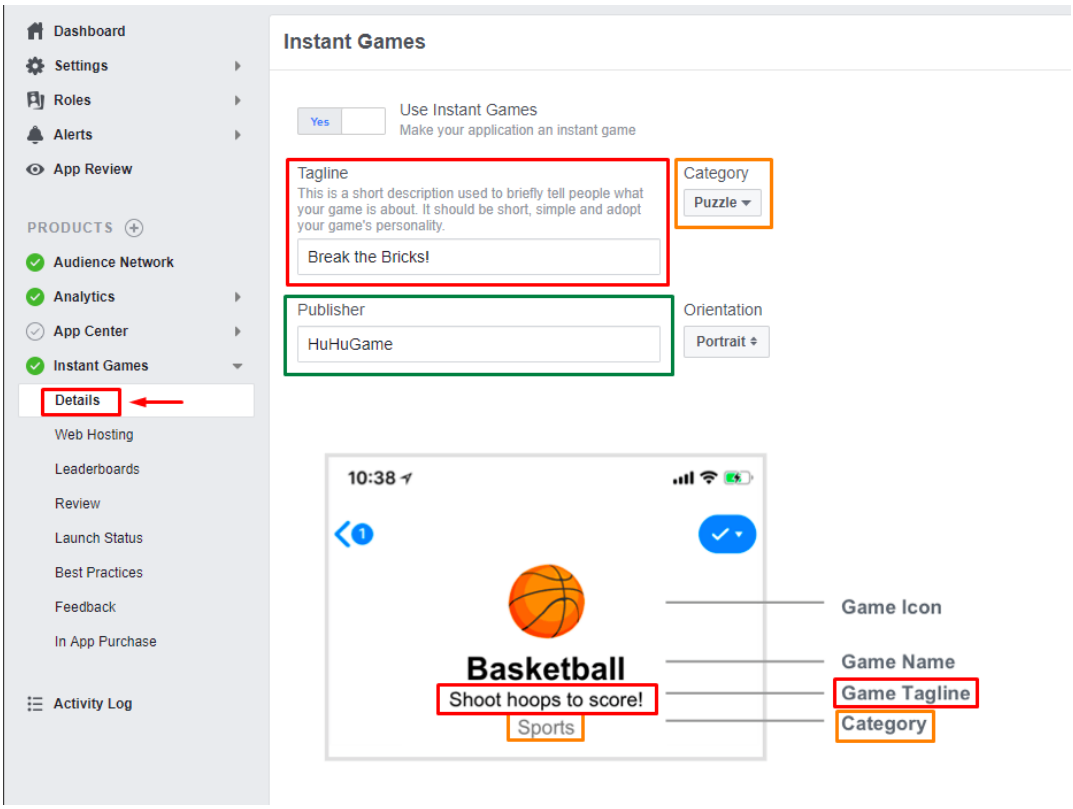


In the above image, the most important steps under the basic tab are described.

1. The namespace describes how your game can be found when searching for it. For example, here it is "maya-shooter" and we can find the application by going to "apps.facebook.com/maya-shooter"
2. Privacy Policy and Terms of Service URL links are needed. This will always be: "http://foreign.sanside.net/index.php?r= which is the new privacy policy that was translated into english
3. The App Icon is the main picture of the application that you will see when looking for the game. This is the most common icon that will appear for the game. The size is 1024x1024.
4. You should also choose the category of app to be "Game" and change the sub-category based on what kind of game it is.

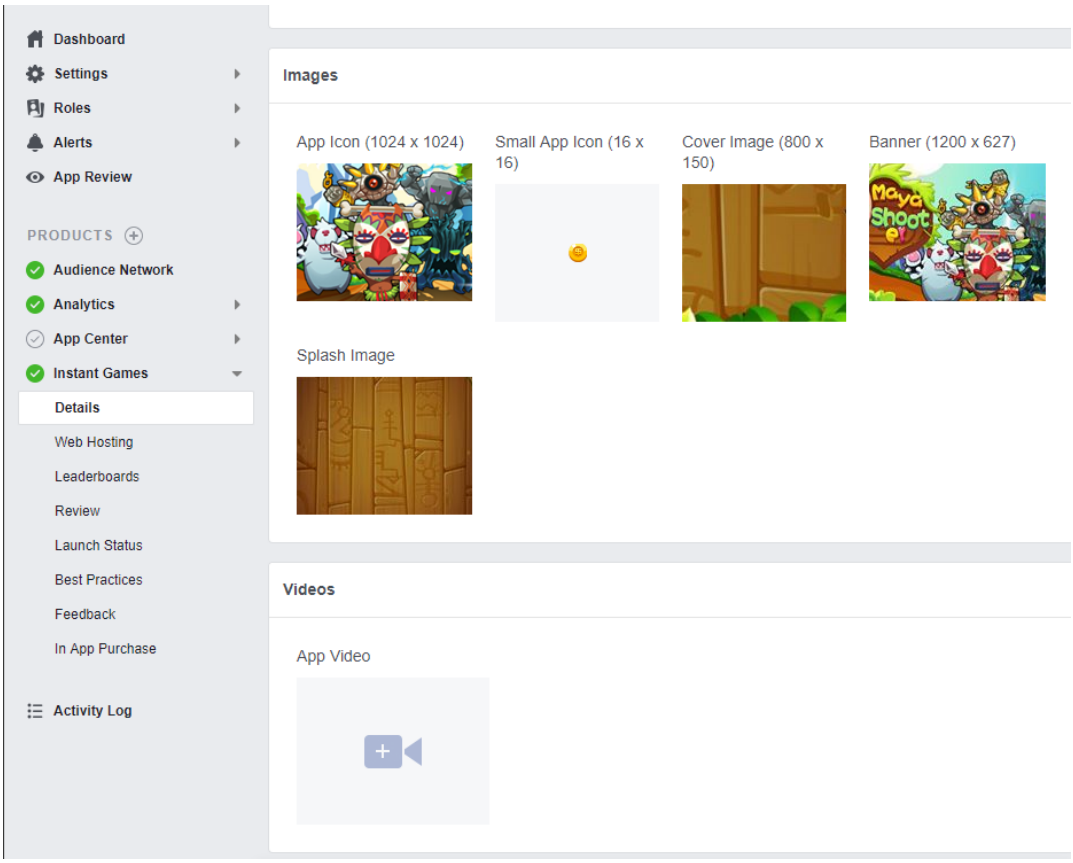
5.2 Instant Games Details

Under the instant games tab, you will have to put more information about the game you are uploading.



Under the instant games tab, you will need to give specific information pertaining to the game you created and how it will appear in the application. The following things that need to be added have been color coded to show where they appear. Here you need to:

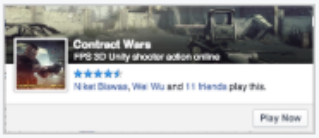
- include a tagline, which is similar to a quick slogan about the game. Try to explain the game in less than 10 words.
- choose the category that the game is liste under. In this case, Maya Shooter was a puzzle game so I chose puzzle.
- Write the publisher name. This will be either HuHuGame or Sanside Technology depending on what you would like to put.



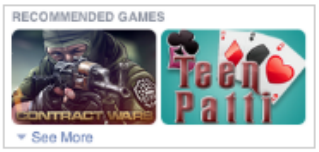
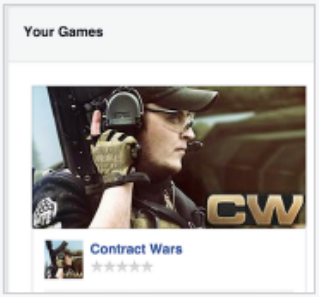
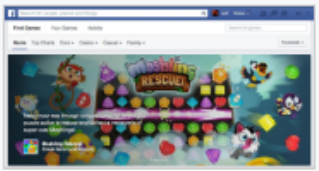
The following images and video files also have to be uploaded before submitting the game for review. These files are usually used when searching for your game and finding it in the Facebook Instant Games Store. Below is a link to the full article of the App Center Tab and what images need to be uploaded as well as a picture that shows what each of the pictures will be used for.

The splash image is not listed, but it is the background of the game while it is loading. I have been using the game backgrounds (without the logo or characters) as the splash screen as it fits well with what a splash screen is suppose to be.

App Center Tab Explained Here

Size (px)	Display Location	Example
16 x 16	News Feed stories, bookmarks	
1024 x 1024	Square icon on detail pages, hovercards	

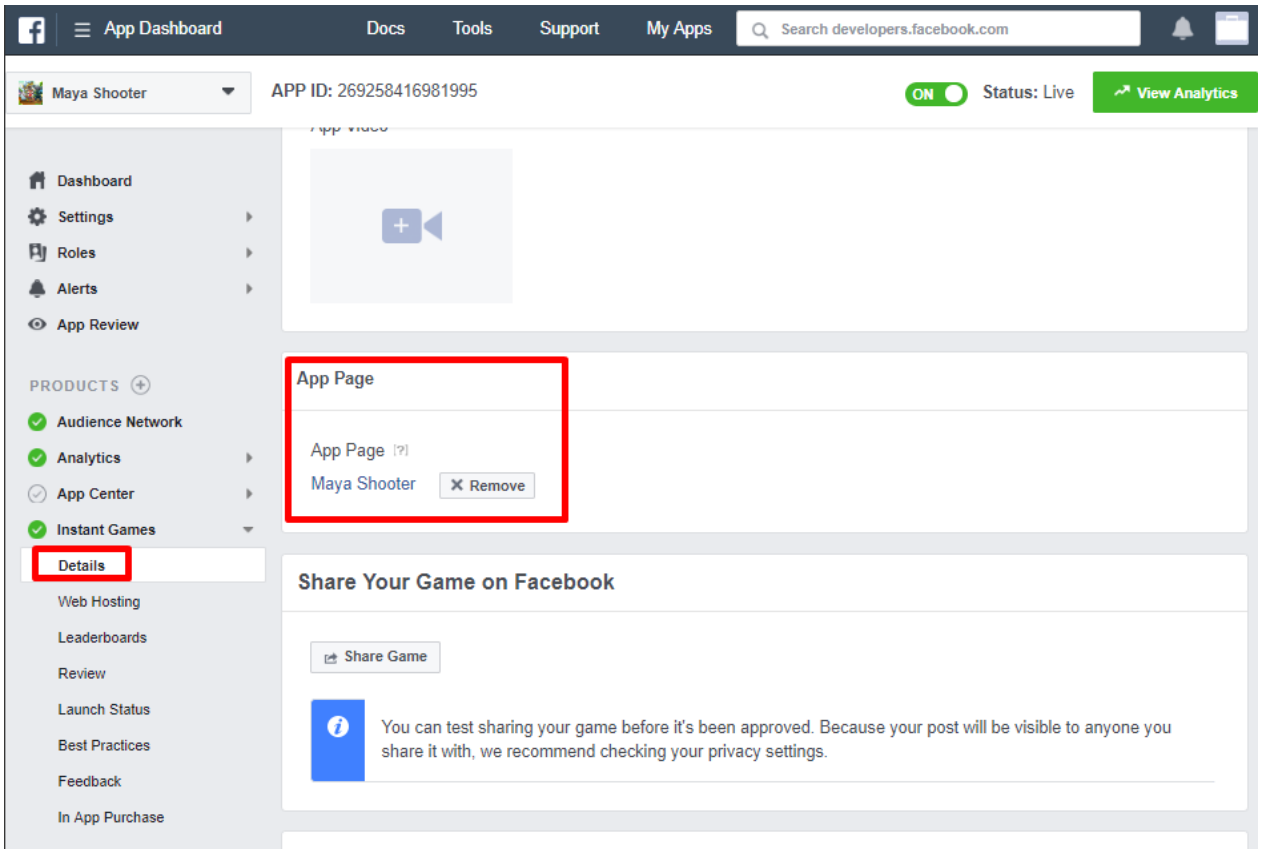
Web Banners

Size (px)	Display Location	Example
155 x 100	Recommended games on homepage	
1200 x 627	Displayed in the Your Games section of Facebook	
800 x 150	Cover image	
1848 x 682	Homepage editor pick (optional, used only if selected)	

5.3 Creating an App Page

In order to promote the game as well as let other people know about information that is coming out about the game or any news with updates, each facebook application should be linked to a facebook app

page. This is similar to a facebook profile, except that it is specifically for the game instead of a facebook person like a normal facebook page is for.



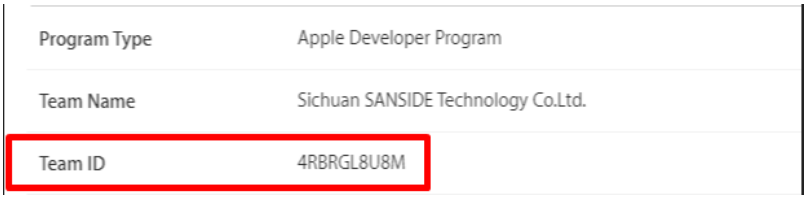
When making a new app page, the following image above will be different, asking instead to create a page. When creating a page, click on the Business side on the left and under category choose "App Page". Finally, name it same as the name of the application so that it is easy to see what the page is for.You can customize this page more to market your game and try to post pictures, events or information about the game here to get more players to play the game. You can also make a button that gets players to play. I recommend just looking at all the features on the page, as there are too many to explain thoroughly.

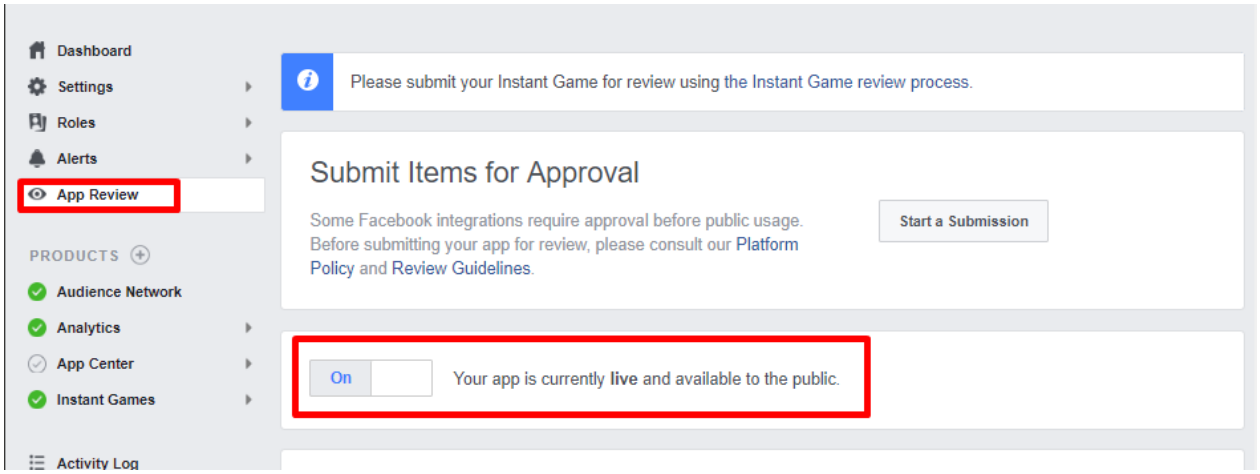
6 Sending for Review

After the game is integrated with the Facebook SDK, Advertisements are implemented with Audience Network, and all the necessary information is posted, you can apply for a review process by Facebook to finally get the game onto Facebook.com.

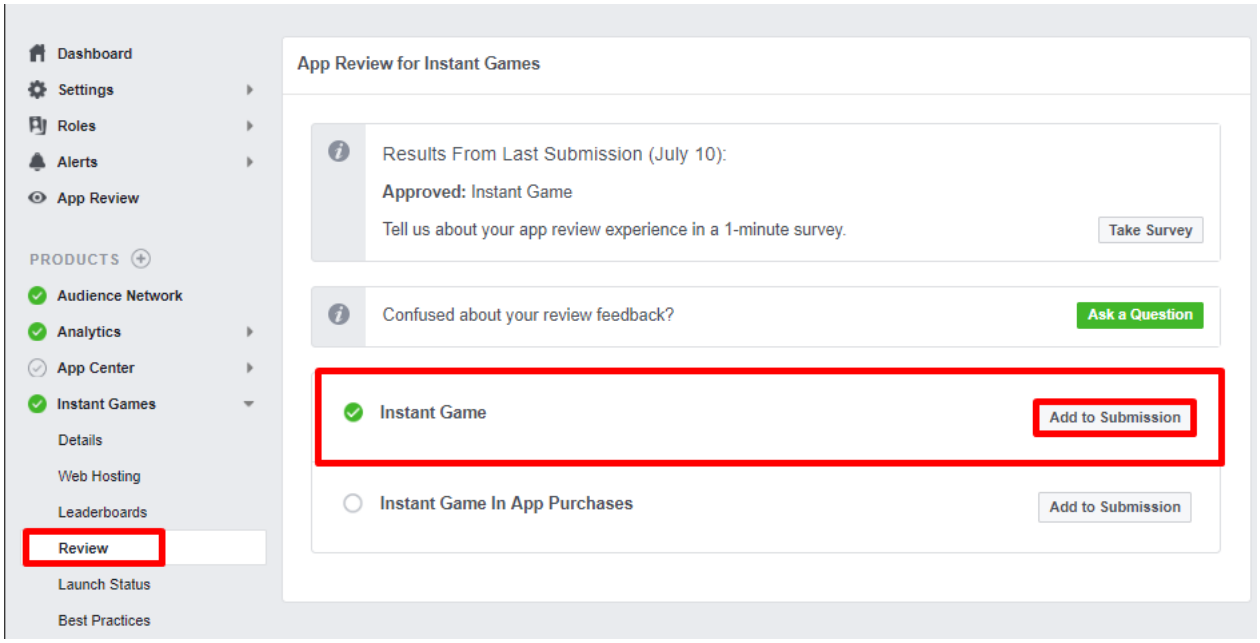
1. First, go to the App Review tab and switch the button to make your application go live. This will allow confirm that your application is allowed to be used on Facebook.com

   Note: At one point in the process of the review, you will be asked to provide the Apple developer team ID. You can either log into developer.apple.com website and find it, or use it from the image below:





2. Then, we also need to submit the instant game part of the game for review. Under the Instant Games tab click review and select "Add to Submission" near "Instant Game". If your game also has in app purchases, then the other one will have to be selected as well.

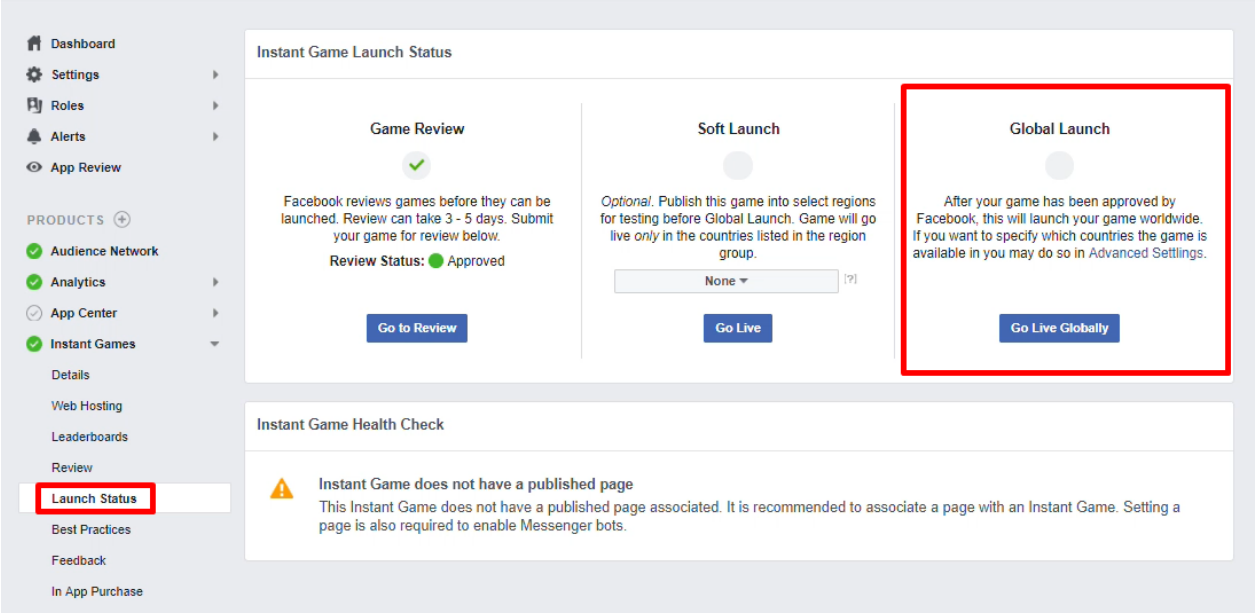


3. This part of the process takes the longest time of waiting. After submitting both reviews, you will need to wait for Facebook to accept them and get back to you. If they accept, then you are clear to go onto

the next step and launch the game; if not, then see what they say you did incorrectly, change it, and send it for submission again.

7 Launch Status

Finally, after doing everything else, you are ready to launch. If you do not know if you did everything, you will be ready to launch if the Game Review icon on the left side (seen below) has a green checkmark. If not, go to the review and see what you are missing before continuing.



Press "Go Live Globally" to launch the game to the rest of the world!

Note: You can only globally launch an app, once a week. If you are trying to put a lot of games onto Facebook, you will only be able to do one every 7 days.