Configuring Google Cloud Messaging Service for Android Devices

ZENworks® Mobile Management 2.8.x

November 2013

Novell®

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1800 South Novell Place
Provo, UT 84606
U.S.A.
www.novell.com

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Google Cloud Messaging for Android

What Is GCM

Google Cloud Messaging (GCM) for Android is a service that allows *ZENworks Mobile Management* to send push notifications from the server to the *ZENworks Mobile Management* Android device agent.

How GCM Works

ZENworks Mobile Management can use the Google Cloud Messaging service to let Android devices know that it is time to synchronize. Each device establishes an accredited and encrypted IP connection with the GCM service. Whenever notifications for the device are available, the *ZENworks Mobile Management* server connects with GCM servers. GCM then pings the device telling it to synchronize with *ZENworks Mobile Management*. This method of initiating synchronization is used in place of the *ZENworks Mobile Management* app's device connection schedule, eliminating delayed updates to the device. Using the service offers added functionality in the following ways:

- Security commands such as Full Wipe or Lock Device are applied immediately.
- Changes made to a policy suite or user settings are applied immediately.
- Android corporate resource assignments are applied immediately.
- Fewer resources are used than with direct push, since the connection is not persistent.

Requirements

- *ZENworks Mobile Management* version 2.8.2 or later
- Port 5228-5230 (GCM does not provide specific IPs, so it frequently changes IPs.
- A Google Mail (Gmail) account (required for obtaining the GCM token and Sender ID)
- Submit Sender ID to Google for approval (approval process can take up to several weeks)

Prerequisites for Devices

- Devices must run Android 2.2 or higher.
- Certain 2.2.x devices will not register with GCM properly. In this case, the *ZENworks Mobile Management* device connection schedule handles the aspects of queuing of messages and delivery to the target Android app running on the device.
- Devices with an Android OS lower than 4.0.4 must have a Gmail account and have the Google Play Store application installed on the device.
- A Google account is not required on devices running Android OS 4.0.4 or higher.

An Overview of the Steps to Set Up GCM Service

Only one project is required per *ZENworks Mobile Management* system, regardless of the number of organizations hosted on the server.

From the main page of the Google APIs Console:

1. Create a Google API project that will generate the GCM Sender ID.
2. Enable the GCM Service in the main page of the Google APIs Console.
3. Obtain an API Key.
4. Submit Sender ID to Google for approval (approval process can take up to several weeks)

On the *ZENworks Mobile Management* server:

5. Enter the GCM credentials on the *ZENworks Mobile Management* server and enable the service for each organization.

Set up GCM

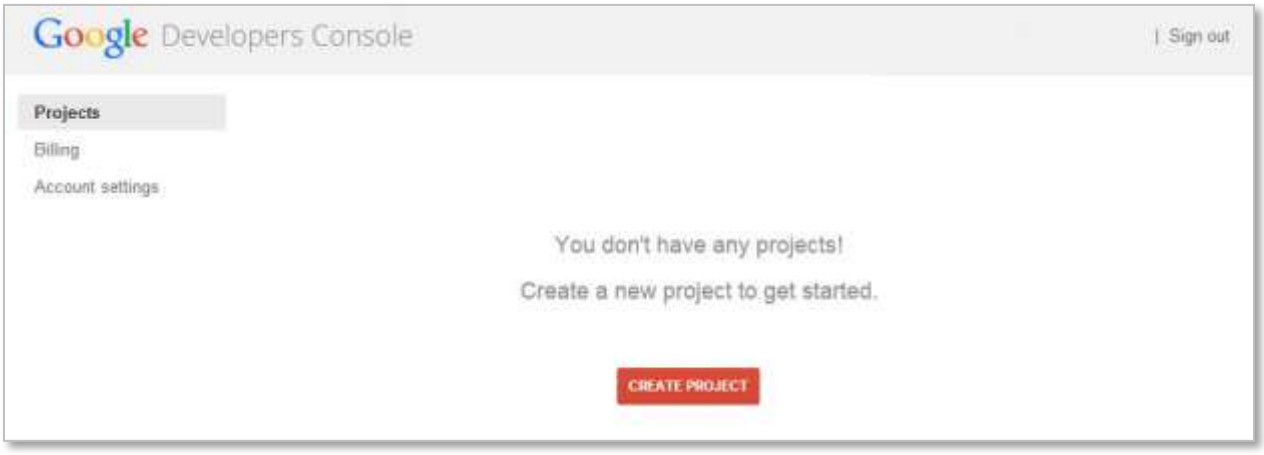
Step 1: Create a Google API Project

Make sure you have a Gmail account before you begin.

1. Navigate to the Google API Console page at https://code.google.com/apis/console and sign in using your Gmail account credentials. Do not choose the option to use an older version of the Developers Console.

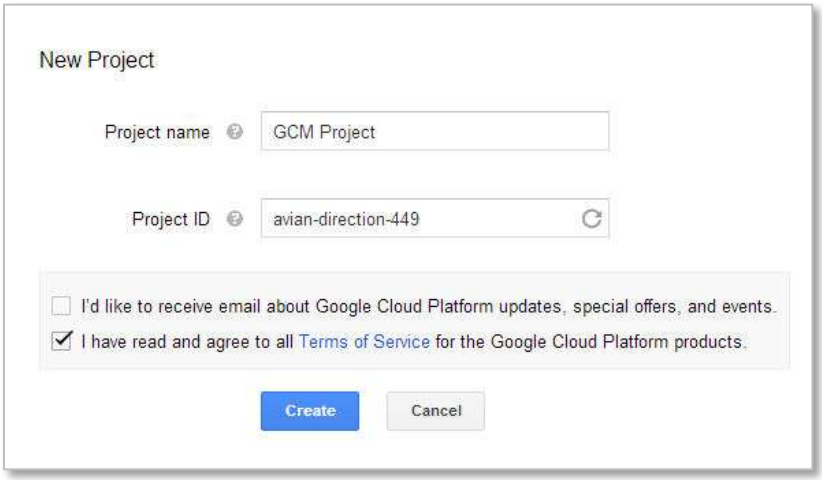
   Note: If you have existing projects, you will see the Google API dashboard first. Create a new project by clicking *Create project . . .*

2. Click **Create project . . .**



3. Enter a name for the project in the **Project name** field. Make a note of the **Project ID** that has been assigned. This will be used later as the GCM **Sender ID**.

4. Check the box next to the *Terms of Service* for the Google Platform products and click **Create**. The *Project ID* and *Project Number* will display on the main Google API Console page.



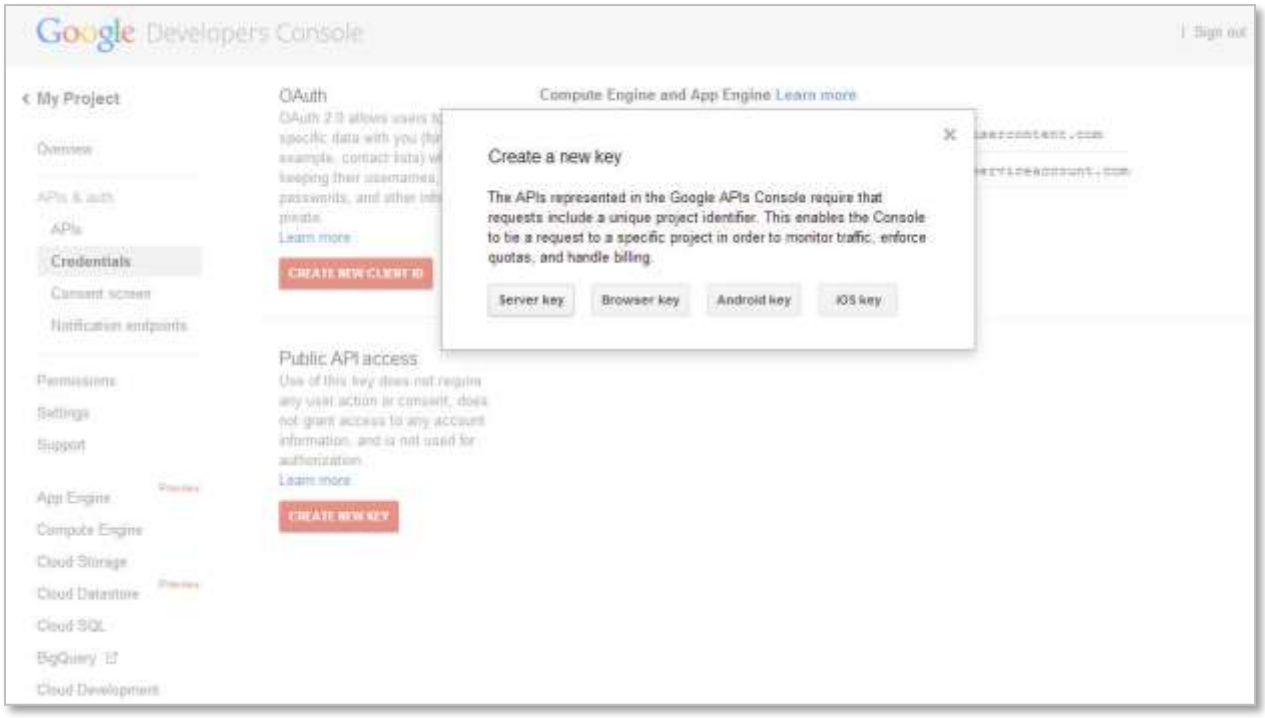
Step 2: Enable GCM Service

1. From the left panel of the main Google API Console page, select **APIs & auth** > **APIs**.
2. Scroll to locate the **Google Cloud Messaging for Android** and click **OFF** to toggle the option ON.

3. When the terms of service display, check the box beside the agreement statement and click **Accept**. GCM is now enabled for the project.

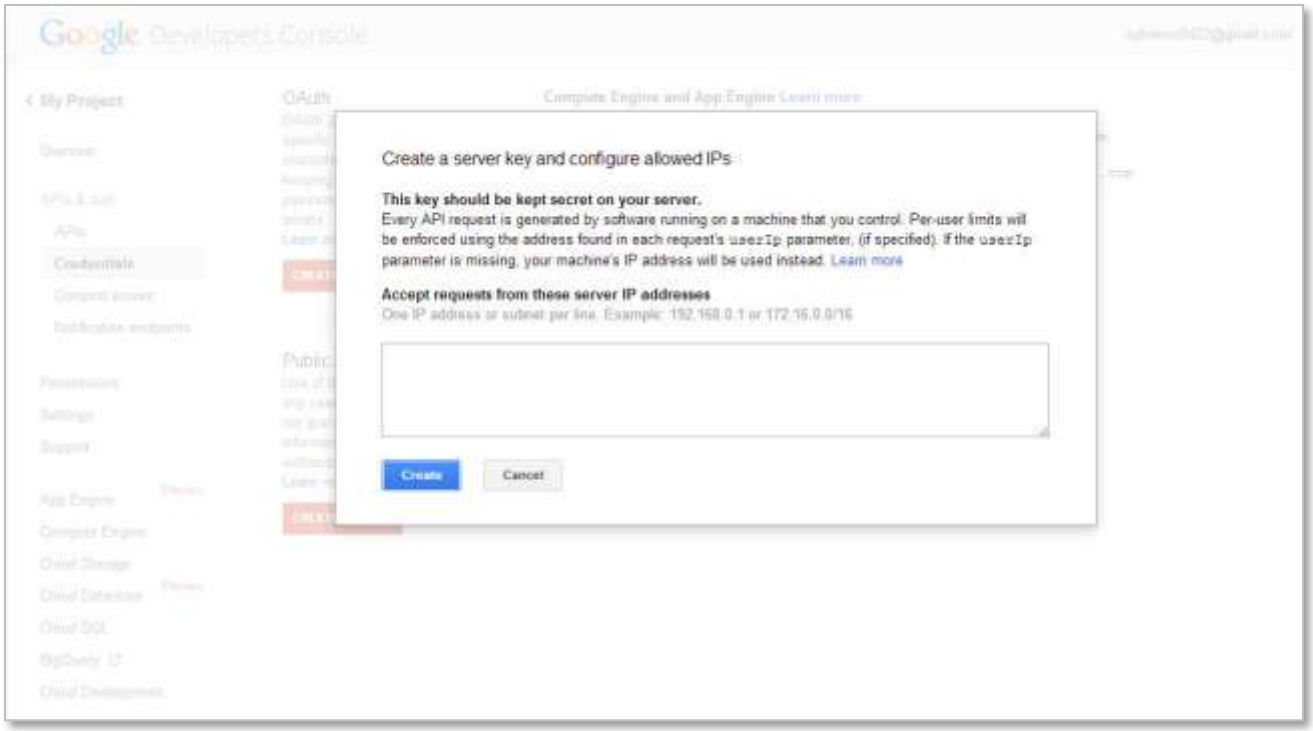
Step 3: Obtain the API Key from the Google API Website

1. Again, from the left panel of the main Google API Console page, select **APIs & auth** > **Credentials**.
2. Under *Public API access*, click the **CREATE NEW KEY** button.

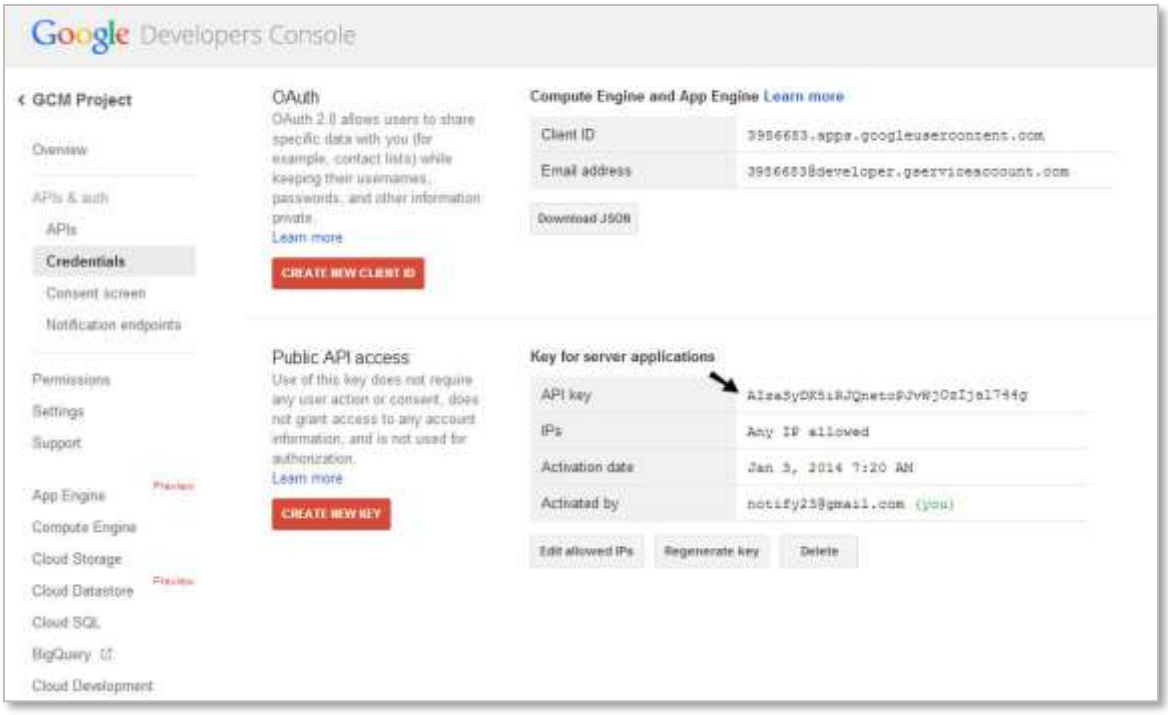


3. Select the **Server key** option on the pop-up.

4. On the pop-up, click **Create**.



5. Make a note of the **API key**. You will need this along with the *Sender ID* created in Step 1 to configure the *ZENworks Mobile Management* server for GCM service.



Step 4: Register the Project ID with Google

The last step is to register the Project ID (Sender ID) for GCM Cloud Connection Service (CCS). Registering your Project ID whitelists it with Google and gives your server access to the GCM APIs.

Once you have submitted the CCS form, approval from Google can take from one day to several weeks, so you will want to submit the form as soon as you generate the Sender ID and API Key.

1. From a browser, navigate to https://services.google.com/fb/forms/gcm.
2. Fill out the form, entering your *Sender ID* in the **GCM Project ID** field.
3. Click **Submit** to send the form.

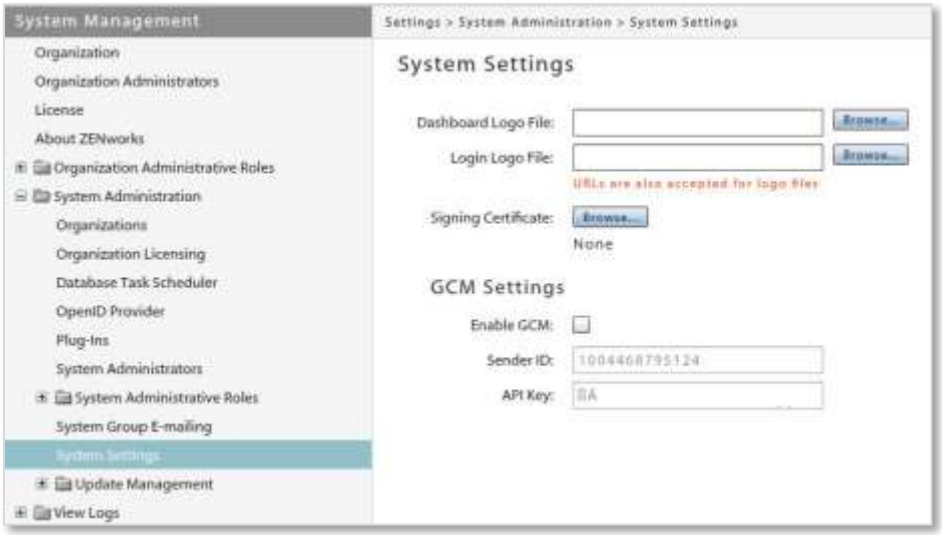
Configure the Server for GCM Service

The GCM service must be enabled for the system on the *ZENworks Mobile Management* server under *System Settings*. GCM credentials (Sender ID and API Key) are also entered here.

Only one set of credentials is required per system, regardless of the number of organizations the system hosts. The GCM service can be turned or left off for each individual organization.

Enter your GCM credentials and enable the GCM service for the system

1. From the *ZENworks Mobile Management* dashboard, select ***System*** > ***System Administration*** > ***System Settings***.
2. Check the box next to **Enable GCM**.

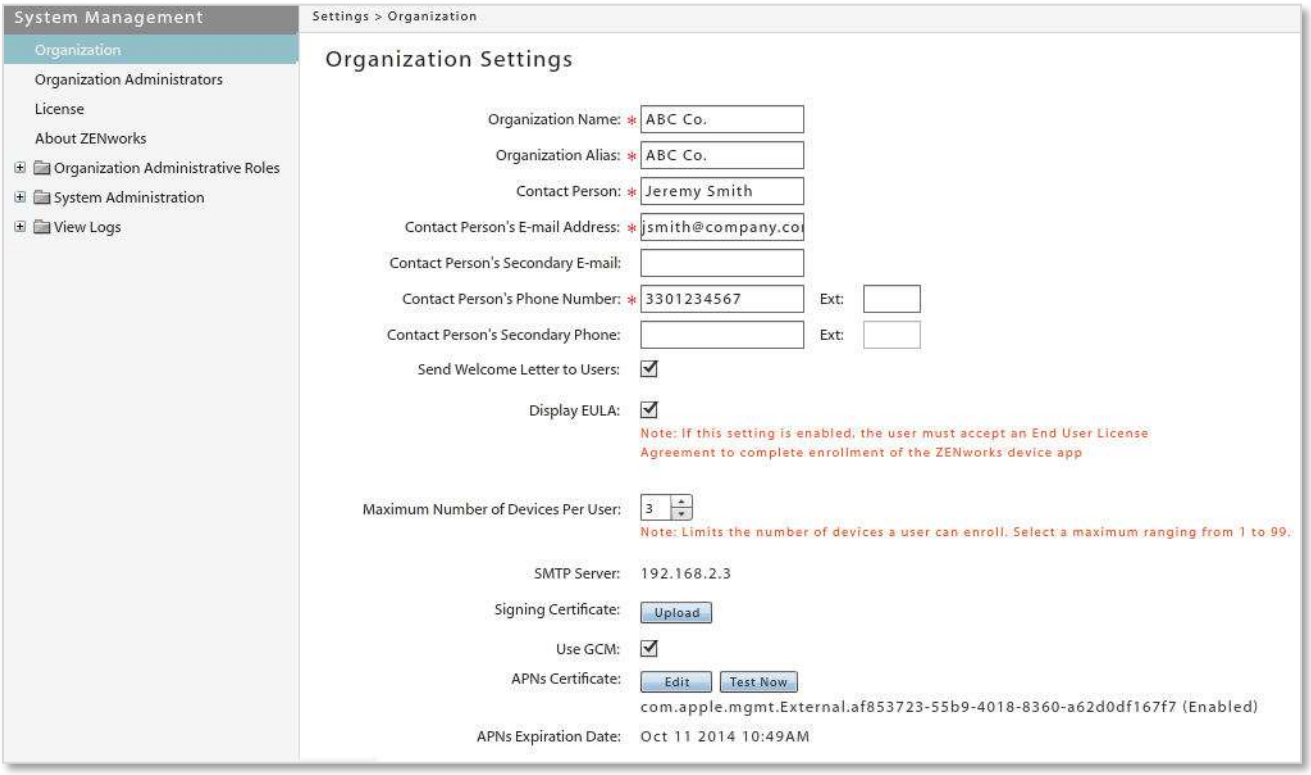


3. Enter the **Sender ID** and the **API Key** that were generated via the Google API Console.
4. Click **Save Changes**.

Toggle the service on for each organization that will use GCM

1. From the *ZENworks Mobile Management* dashboard, select ***System*** > ***Organization.***

2. Check the box next to **Use GCM** to turn on the service for the organization.



3. Click **Save Changes**.

4. To turn on GCM service for other organizations hosted by the system, switch to another organization and mark the **Use GCM** checkbox.

   To switch organizations:
   Select *System* > *System Administration* > *Organizations* and click the **Switch Organizations** button.