Installation Guide

RMS-SCH-GGL

RMS Enterprise Scheduling Interface for Google Calendar

AMX DOMESTIC CHANNEL PARTNER and END CUSTOMER LIMITED WARRANTY, DISCLAIMER AND LICENSE

(Excerpt from CHANNEL PARTNER TERMS AND CONDITIONS Versions 11.17.2011 with updates for previous version 8.25.2010 [sections 6.1 (a), (b) and (f)])

Definitions

"End Customer" means an authorized end customer with direct in warranty privileges from AMX. Within this limited warranty, disclaimer and license document, "End Customer" shall have the same meaning as "Channel Partner" with the noted exceptions of Sections 6.5 through 6.9 which are not applicable or available to End Customer's directly from AMX. Offerings described in Sections 6.5 through 6.9 are available to End Customer only through their selected authorized AMX Channel Partner.

6. LIMITED WARRANTY; RETURN, REPAIR AND REPLACEMENT

6.1 AMX warrants the Products to be free of material defects in materials and workmanship under normal use for three (3) years from the Shipping Date (or such other period as may be specified below), subject to the following limitations and exceptions ("Limited Warranty"). For any Product, "Warranty Period" means the period during which the Limited Warranty is in effect, as set forth herein.

(a) LCD and LED panels are warranted for three (3) years from the Shipping Date, except for the display and touch overlay components, which are warranted for a period of one (1) year from the Shipping Date.

(b) Disk drive mechanisms, pan/tilt heads and external power supplies are warranted for a period of one (1) year from the Shipping Date.

(c) AMX lighting Products are warranted to switch on and off any load that is properly connected to our lighting Products, as long as the AMX lighting Products are under warranty. AMX also warrants the control of dimmable loads that are properly connected to our lighting Products. The dimming performance or quality thereof is not warranted, due to the random combinations of dimmers, lamps and ballasts or transformers.

(d) AMX software and firmware included in the Products is warranted for a period of ninety (90) days from the Shipping Date.

(e) Batteries and incandescent lamps are not covered under the Limited Warranty.

(f) The Warranty Period for AMX AutoPatch EPICA, Enova DGX, Modula, Modula Series 4, Modula Cat Pro Series and 8Y-3000 Product models will continue for the original installation until five (5) years after the issuance of a PDN with respect to termination of the applicable Product model. However, if the Product is moved from its original installation to a different installation, the Warranty Period will automatically become three (3) years from the Shipping Date and, if more than three (3) years have elapsed since the Shipping Date, the Warranty Period will automatically expire.

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Note: *Refer to www.amx.com to view/download the latest complete AMX Warranty and Return Policies.*

Trademark Notices

Table of Contents

RMS-SCH-GGL RMS Enterprise Scheduling Interface for Google Calendar

Overview

RMS-SCH-GGL RMS Enterprise Scheduling Interface for Google Calendar (RMS-SCH-GGL) utilizes the Google Calendar API to communicate with Google Apps for Business. RMS-SCH-GGL is intended for use with RMS Enterprise (v4.7.0 or higher).
The plug-in provides appointment management features of the RMS application to synchronize RMS location schedules with Google Calendar hosted services.

- Add rooms in the RMS application that have you would like to schedule and associate them with a Google Room Mailbox.
- Display the daily room schedule, appointment details, and create ad-hoc meetings directly from a touch panel that are saved to the Google Calendar hosted service.

RMS-SCH-GGL is intended for use with RMS version 4.7.0 (or higher).

System Requirements

- **RMS Enterprise Server:** Version 4.7.0
- **Google Services Account:** Provides the Google Certificate and Service Email Account, both required to install and configure RMS-SCH-GGL.
- **Google Calendar Requirements:** Google Calendar Apps for Business.

Note:The latest version of RMS-SCH-GGL (v1.0.20) comes with bundled JRE(Java-11.0.4) and doesn't require Java to be installed separately.

Below steps should be followed to upgrade from earlier version to current RMS-SCH-GGL (v1.0.20):

- **Upgrade without uninstalling existing version of RMS-SCH-GGL:**
  a. **Download and install RMS-SCH-GGL(v1.0.20).**
  b. **Uninstall Java if not required.**
- **Upgrade with uninstallation of existing version of RMS-SCH-GGL:**
  a. **Uninstall existing version of RMS-SCH-GGL.**
  b. **Uninstall Java if not required.**
  c. **Download and install RMS-SCH-GGL (v1.0.20).**
- **In-case user uninstall Java(without uninstalling existing version of RMS-SCH-GGL), and then downloads and install RMS-SCH-GGL(v1.0.20), installed RMS-SCH-GGL won't work.**
- **To recover, user must uninstall existing RMS-SCH-GGL and install RMS-SCH-GGL(v1.0.20) again.**

Pre-Installation Checklist

Before installing the RMS Enterprise Interface for Google, review the following checklist to verify that these basic system requirements are met:

- **Windows Desktop Experience:** If installing the RMS Enterprise Scheduling Interface for Google on a Windows Server, it is a requirement to also install the Windows Feature called **Desktop Experience** in order for the RMS Scheduling Configuration Tool to work properly.
- **Google Apps account:** See the *Generating a Google Certificate and Service Email Account* section on page 17 for details.

Installation and Configuration Steps - Overview

1. **Gather Google Services Account Information:** To install and configure the RMS Scheduling Interface for Google, the following information will be required:
   - *Google Service Account Certificate* - This file must be copied to the RMS Server.
   - *Google Service Account Email Account* - This email address will be used to to synchronize RMS resources (locations) with Google Calendar.
2. **Install the RMS Scheduling Interface and Plug-In:** In order to add the Scheduling Interface (required to use any Scheduling Plug-Ins) to your RMS Enterprise system, it is necessary to upgrade your RMS Entitlement with a Scheduling License.
   - Refer to the *Adding the RMS Scheduling Interface* section on page 17.
   - Refer to the *RMS Enterprise Scheduling Interface for Google Setup Wizard* section on page 7.
3. **Configure the Google Calendar Scheduling plug-in:** Refer to the *Configuring RMS Scheduling for Google* section on page 10 for instructions.

Upgrading the RMS Scheduling Interface

To upgrade from a previous version of the RMS Scheduling Interface, follow the instruction for installing the current version (see the *RMS Enterprise Scheduling Interface for Google Setup Wizard* section on page 4 for details). The installation process removes the previous version before installing the new version.

Adding the RMS Google Scheduling Interface

Overview

In order to add the Google Scheduling Interface to your RMS Enterprise system, it is necessary to upgrade your RMS Entitlement with a *Scheduling License*. The Scheduling License enables support for various scheduling plug-ins for RMS Enterprise.

This section describes upgrading your RMS Entitlement with a *Scheduling License*. The Scheduling License enables support for various scheduling plug-ins for RMS Enterprise.

*To ensure optimal performance of the RMS Enterprise UI, the RMS Scheduling Interface application should **not** be installed on the Primary RMS Enterprise Server. Install the RMS Scheduling Interface application on a separate server.*

Verify that the server that will run the RMS Enterprise Scheduling Interface meets or exceeds the minimum OS and hardware requirements indicated below.

Scheduling Server Requirements

Verify that each server that will run the RMS Enterprise Scheduling Interface meets or exceeds the following minimum requirements (check the appropriate boxes below):

Scheduling Server Hardware Requirements			
Does your Scheduling server meet the following Minimum Hardware Requirements?		Yes	No
• Processor	Dual core Intel Xeon® processor @ 2.67GHz (or equivalent)		
• Memory	4 GB		
• Display	1280 x 1024 resolution		
• Hard Disk	1 GB available space for RMS Enterprise Scheduling application files.		
Yes to all	Please continue to the next step.		
No to any	You must obtain a server that meets these minimum requirements to install RMS Enterprise.		

For installations with more than 50 locations that use the Scheduling Interface, a separate server from the RMS Application is ***required***.

Scheduling Interface Operating System			
Do you have a compatible Microsoft® Server OS installed?		Yes	No
Supported Microsoft Server Operating Systems: • Microsoft Windows Server 2012 Standard Edition ***Note**: When using Windows Server 2012, the administrator must install NET 4.0 or higher (required by the AMX License Tool).* • Microsoft Windows Server 2008 R2 (x64): Web Edition / Standard Edition / Enterprise Edition • Microsoft Windows Server 2008 SP2 (x86 and x64): Web Edition / Standard Edition / Enterprise Edition • The Windows *Desktop Experience* feature is required in order for the RMS Scheduling Configuration Tool to work properly.			
Yes	Please continue to the next step.		
No	You must obtain a compatible server OS to install RMS.		

Scheduling Interface Operating System (Cont.)		
Do you have an administrative account to the server where RMS will be installed?	Yes	No
***Note**: RMS is a system level application and requires administrative access to install and configure RMS, including the Scheduling Interface and Scheduling Configuration Tool .*		
Yes	Please continue to the next step.	
No	You must obtain an administrative logon account, or logon to the server with a user account that has administrative access to the server.	

Before You Start

- Verify that the Primary RMS Server is running.
- Know the IP Address and login credentials for the RMS Enterprise Server.
- Have a valid Google certificate (loaded locally on the Scheduling server), and the Google services account email address (see page 12).

RMS Enterprise Scheduling Interface for Google Setup Wizard

To install the Google Scheduling Interface, run the *RMS Enterprise Scheduling Interface for Google* Setup Wizard:

1. Download the RMS Enterprise Scheduling installation file (**ResourceManagementSuiteScheduler.msi)** from www.amx.com/rms/.
2. Double-click to launch the *AMX RMS Scheduling Setup Wizard* (FIG. 1):

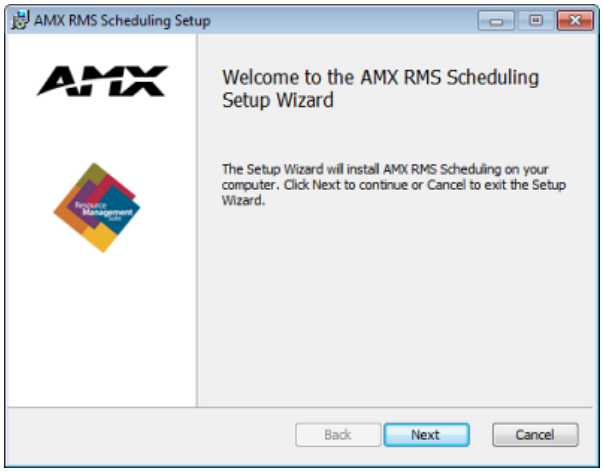

FIG. 1 AMX RMS Scheduling Setup Wizard (Welcome screen)

3. Click **Next** to proceed to the *End-User License Agreement* screen (FIG. 2):

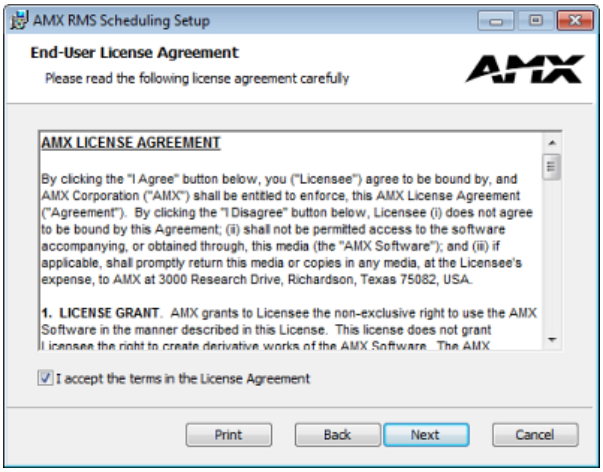

FIG. 2 AMX RMS Scheduling Setup Wizard - End User License Agreement

4. Click *I accept the terms in the License Agreement* to enable the *Next* button, then click **Next** to proceed to the *Destination Folder* screen (FIG. 3):

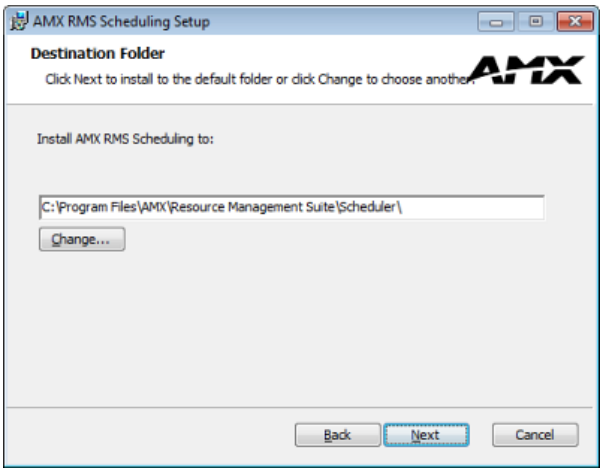

FIG. 3 AMX RMS Scheduling Setup Wizard - Destination Folder

The default target directory for the Interface installation is indicated in the text field on this screen:

- 32-bit OS: **C:\Program Files\AMX\Resource Management Suite\Scheduler**
- 64-bit OS: **C:\Program Files (x86)\AMX\Resource Management Suite\Scheduler**

In most cases you should use this default setting. However, if your installation requires a different folder, click **Change** and select the desired folder in the *Change Destination Folder* screen.

5. Click **Next** to proceed to the *Ready To Install AMX RMS Scheduling* screen (FIG. 4):

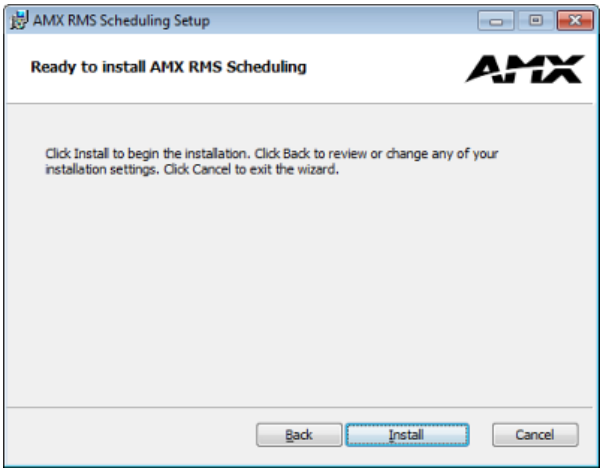

FIG. 4 AMX RMS Scheduling Setup Wizard - Ready To Install AMX RMS Scheduling

6. Click **Install** to begin installing AMX RMS Scheduling to the target directory on the specified server. Installation progress is indicated in the *Installing AMX RMS Scheduling* screen (FIG. 5):

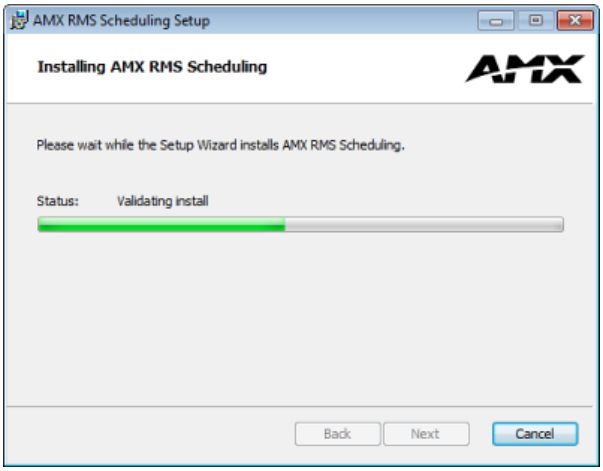

FIG. 5 AMX RMS Scheduling Setup Wizard - Installing AMX RMS Scheduling

7. When the installation is complete, the *Completed the AMX RMS Scheduling Setup Wizard* screen is displayed (FIG. 6):

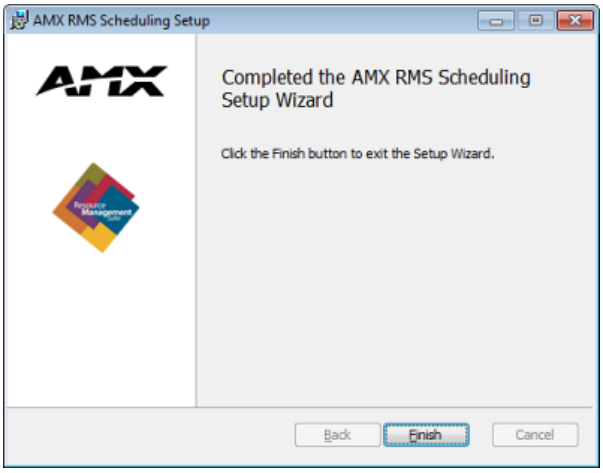

FIG. 6 AMX RMS Scheduling Setup Wizard - Completed the AMX RMS Scheduling Setup Wizard

8. Click **Finish** to close the *AMX RMS Scheduling Setup Wizard*.

At this point, the *RMS Enterprise Scheduling Interface for Google Setup Wizard* is launched automatically:

Note that at this point, the *AMX-RMS Scheduling Configuration for Google* utility is automatically invoked.

Configuring RMS Scheduling for Google

Click **Next** in the final Google Setup Wizard installation dialog (see FIG. 13 on page 9) to launch the *RMS Scheduling Configuration* tool. Use this tool to configure the Google Plug-In to communicate with RMS Enterprise.

1. The initial view is of the **RMS Server** tab (FIG. 14). Use the fields in this tab to enter connection information for your RMS Enterprise server:

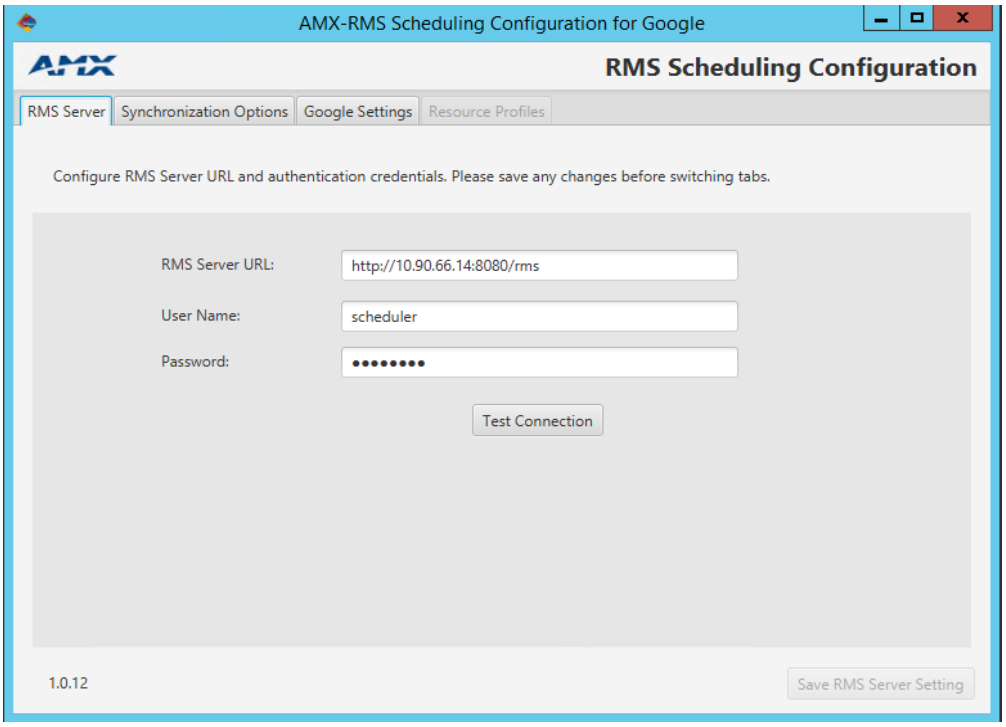

FIG. 14 RMS Scheduling Configuration tool - RMS Server tab (after a successful Test Connection)

RMS Scheduling Configuration - RMS Server Tab	
RMS Server URL:	Enter the URL of the RMS Server that will use the Google scheduling plug-in. ***Note**: This URL can be copied and pasted from the RMS Enterprise UI, but be sure to delete the "/#/" at the end of the address. For example: "**http://192.168.216.145:8080/rms/#/** "must be edited to "**http://192.168.216.145:8080/rms/**".*
User Name:	This field is pre-populated with the user name "*scheduler*"
Password:	Enter the password as required by the server (default = "*password*")

2. Click the **Test Connection** button to verify this information. The program will indicate whether the connection was successful.

   If the connection attempt fails, re-enter the server information and try again.

3. Click **Save RMS Server Setting** to save these settings and register the Plug-In with the server. Note that the program indicates "*RMS Server Settings Saved*", and enables the *Synchronization Options*, *Google Settings* and *Resource Profiles* tabs.

You cannot proceed until you have successfully connected to the RMS Server and saved the RMS server settings.

4. Select the **Synchronization Options** tab to configure a scheduled blackout period (FIG. 15):

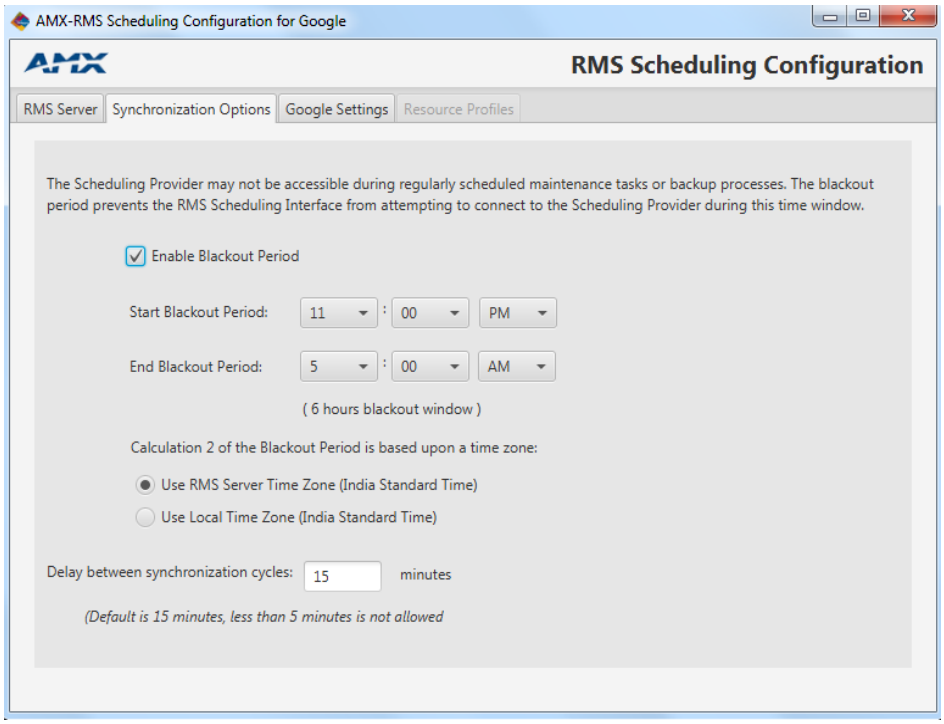

FIG. 15 RMS Enterprise Scheduling Configuration tool - Synchronization Options tab

NOTE

Many systems perform nightly backups or system related processing where the server may not be available or should not be accessed. The blackout option prevents the RMS application from accessing the server during these times. During the blackout period, RMS will not attempt to establish a connection to any Google server.

RMS Scheduling Configuration - Synchronization Options Tab	
Enable Blackout Period:	Select this option to enable a blackout period (de-selected by default). Note that when this option is de-selected, the other options in this tab are disabled.
Start/End Blackout Period:	Use the drop-down menus to specify the Start and End times for the blackout period. Note that the program provides a summary of the current blackout settings directly below these fields (see "*6 hours blackout window*" in FIG. 15).
Calculation 2 of the Blackout Period is based upon a time zone:	Specify how to calculate the blackout period by selecting either *Use RMS Server Time Zone* (default setting), or *Use Local Time Zone*.
Delay between synchronization cycles:	Enter the amount of time (in minutes) between the synchronization cycles used for the blackout period. Adjust this value to accommodate your specific environment. The default setting is 15 minutes, the minimum value allowed is 5 minutes.

NOTE

Changes made on this tab (unlike the other three tabs) are saved automatically.

5. Select the **Google Settings** tab to specify the directory in which the *Google Signed Certificate* exists, as well as specify the *Google Email Account* to use for RMS scheduling (FIG. 16):

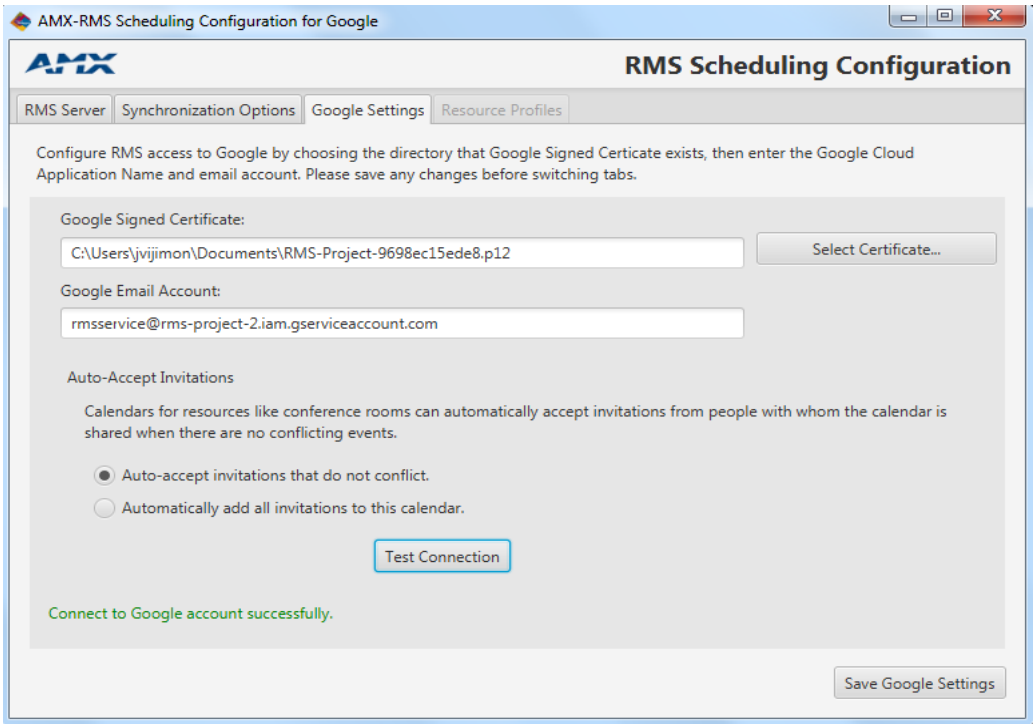

FIG. 16 RMS Enterprise Scheduling Configuration tool - Google Settings tab (indicating a successful connection to Google)

RMS Scheduling Configuration - Google Settings Tab	
Google Signed Certificate:	Enter a directory path to specify the folder containing the Google Signed Certificate. Click on **Select Certificate** to locate and select the Certificate (*.p12) file via the *Select Google Certificate* dialog. Note that the Google Signed Certificate is referred to as a "*Private Key*" in the Google Developer's Console (see FIG. 30 on page 19).
Google Email Account:	Enter the Google Service email account that will be used by RMS for scheduling. This email address is provided by the Google account. Refer to the *Generating a Google Certificate and Service Email Account* section on page 17 for details.
Auto-Accept Invitations	Use these options to select how to managing auto-acceptance of invitations: • **Auto-accept invitations that do not conflict** (default setting): With this option selected, all invitations that do not conflict with another scheduled event for a specific resource (i.e. conference room) are accepted (but not automatically added to the resource calendar). • **Automatically add all invitations to the calendar**: With this option selected, all invitations (including those with conflicts) are automatically accepted and added to the resource calendar.

6. Click the **Test Connection** button to verify this information. The program will indicate whether the connection was successful (FIG. 14).

   If the connection attempt fails, re-enter the server information and try again.

NOTE

*The **Save Google Settings** button is disabled until a successful connection is made.*

7. Click **Save Google Settings** to save these settings.

8. Use the **Resource Profiles** tab to specify the Locations that will use the configured Scheduling Plug-In.

NOTE

*The **Resource Profiles** tab is disabled until a successful connection is made and the Google Settings have been saved.*

This tab is initially empty until the application automatically loads the room list from the Google Apps account. It will contain all resources that have been "shared" with the Google services email provided in the Google settings. (FIG. 17):

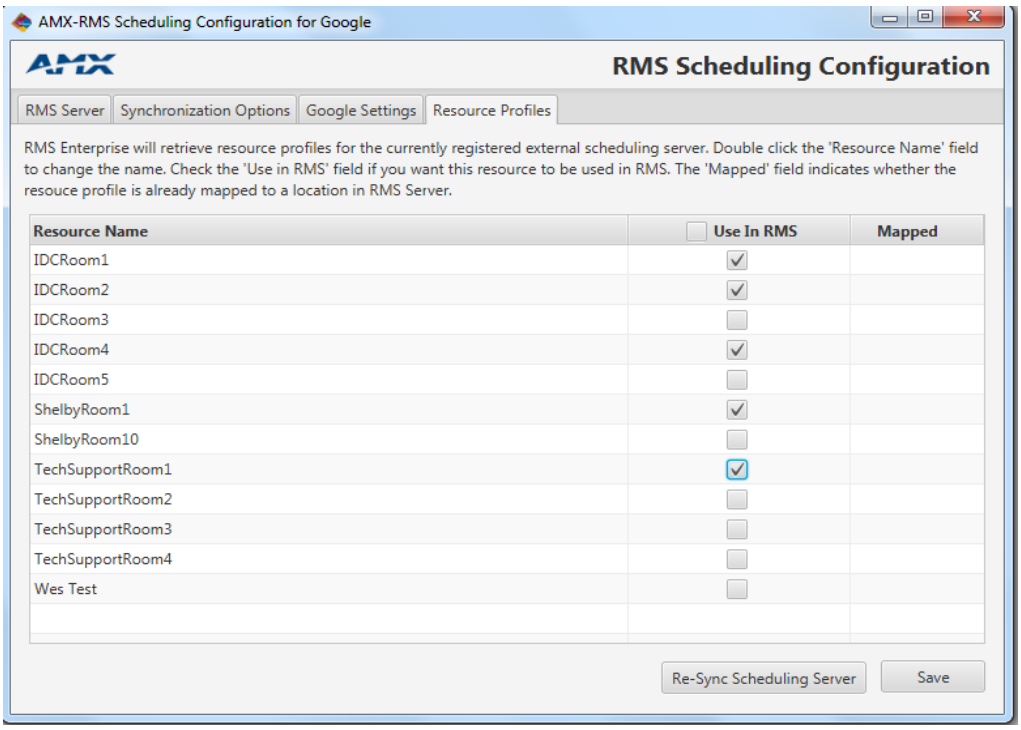

FIG. 17 RMS Scheduling Configuration - Resource Profiles tab

- Double-click on any *Resource Name* to edit the name.
- The *Mapped* column indicates whether each Resource is currently mapped to a location in RMS Enterprise. See the *Location to Resource Profile Mapping* section on page 15.

9. Place a check in the *Use in RMS* column to specify which Locations will use the Scheduling Plug-In. Click **Use In RMS** to select or de-select all Resource Names.

   Click **Re-Sync Scheduling Server** to reload the Resource Name list from the Google server.

10. Click **Save**. This will push the selected (checked) Resources to the RMS Server, where they become "Resource Profiles" in RMS.

11. Exit the **RMS Scheduling Configuration** application (FIG. 18):

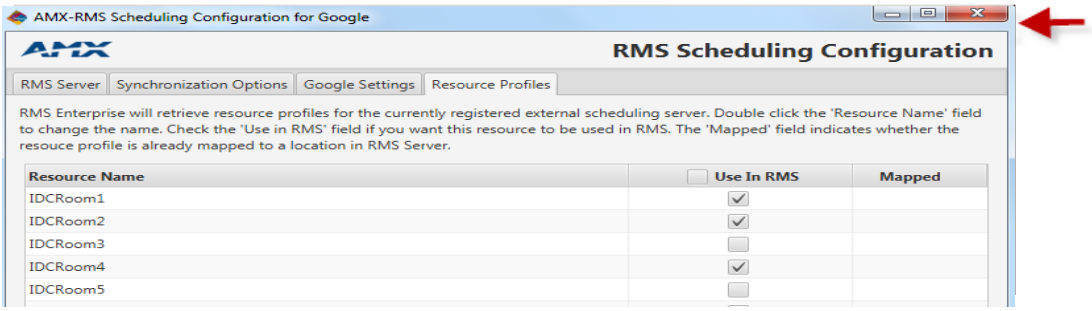

FIG. 18 RMS Scheduling Configuration - Exit

Location to Resource Profile Mapping

Overview

It is necessary to map each of the selected resources (Locations) in the *RMS Enterprise Scheduling Configuration* tool to a *Resource Profile*, in order to enable the scheduling interface for each location. This requires accessing the **Location Management** page in the RMS Enterprise UI:

1. In the RMS Web UI, select **Management > Configure Locations/Clients > Locations** (FIG. 19):

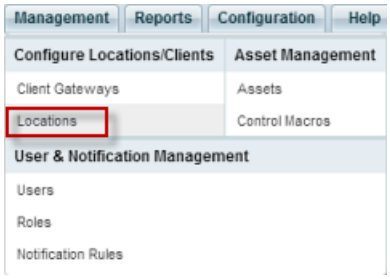

FIG. 19 RMS Web UI - Management > Configure Locations/Clients > Locations

2. This opens the main Location page. In the *Locations* window, select a Location name from the list and click **Edit** (FIG. 20):

FIG. 20 RMS Web UI - Locations Page - Edit button

3. This opens the **Location Edit** page (*Settings* tab).
4. Under **Scheduling Configuration**, open the *Resource Profile* drop-down list to select a Resource Profile to map to this Location (FIG. 21):

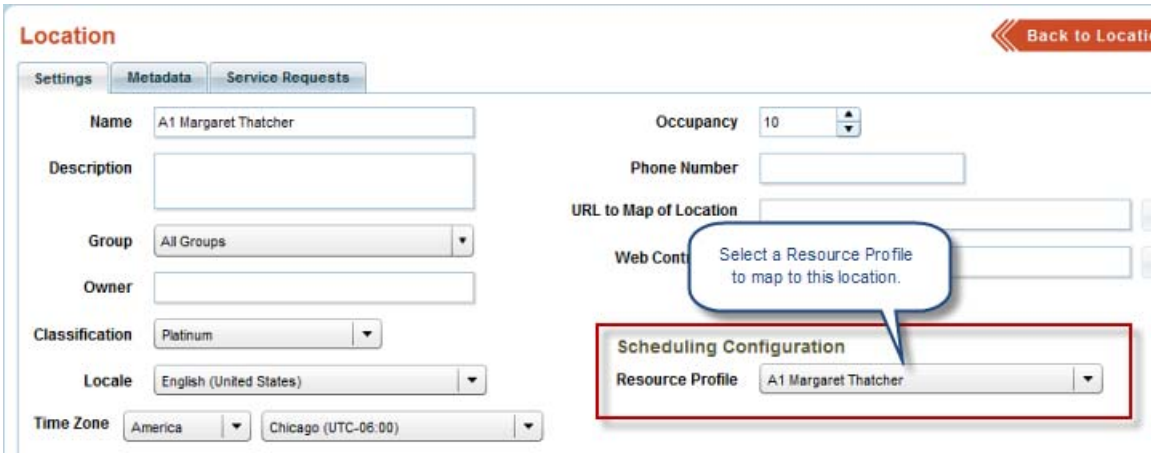

FIG. 21 RMS Web UI - Location Edit Page - Scheduling Configuration drop-down menu

NOTE

The list of Resource Profiles that are available to select in this menu is based on the Resource Names that were selected in the RMS Scheduling Configuration application - Resource Profiles tab. Note that if any of the names were edited in the RMS Scheduling Configuration application, the edited names are displayed here.

This will associate the location with the selected Resource Profile (i.e. the Exchange room mailbox).

5. Click **Apply** to save changes.

As Resource Profiles are mapped to Locations, a green checkmark is added to the RMS Scheduling Configuration application - *Resource Profiles* tab (*Mapped* column) to indicate which Locations have been mapped. For example, FIG. 22 shows the RMS Scheduling Configuration application, indicating that five conference rooms are mapped:

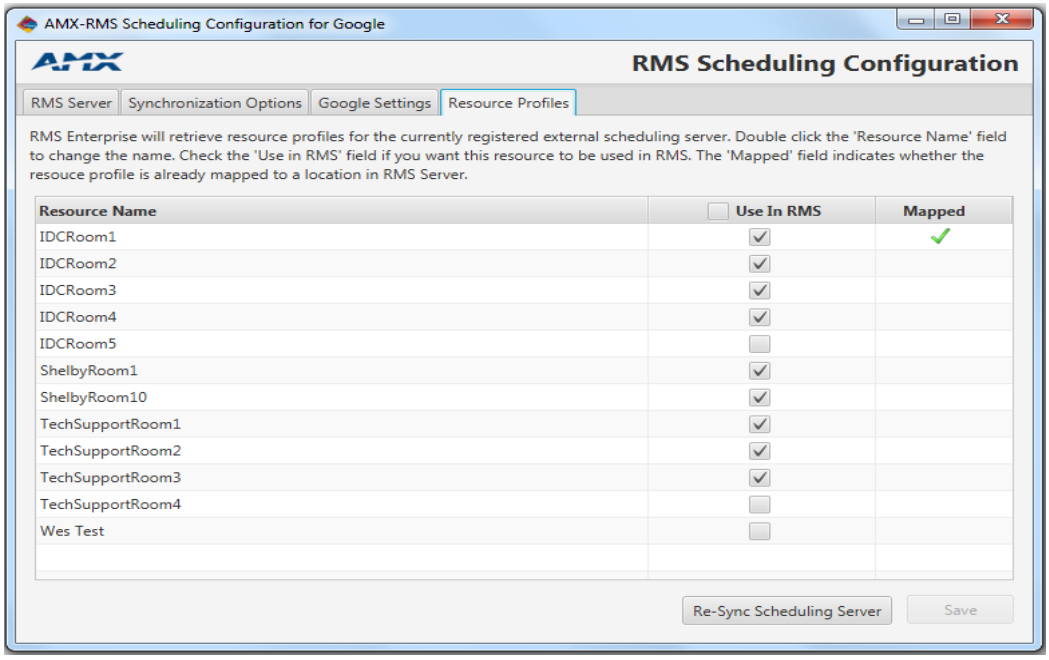

FIG. 22 RMS Scheduling Configuration application indicating fiver rooms mapped)

Appendix

Generating a Google Certificate and Service Email Account

A Google account is required provide the Google Signed Certificate and Google Email Account (both of which are required entries in the **Google Settings** tab of the *AMX-RMS Scheduling Configuration for Google* tool (see FIG. 16 on page 12).

1. Log into the Google Developer's Console using Admin credentials at: https://console.developers.google.com/
2. After a successful log in, click on **Create Project** (FIG. 23):

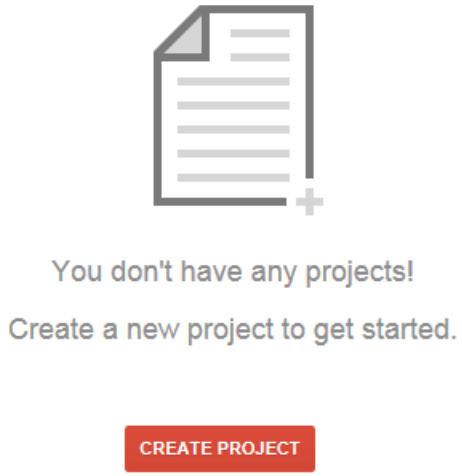

FIG. 23 Google Developer's Console - Create Project

3. In the *New Project* window:
   a. Select *I have read and agree to all Terms of Service for the Google Cloud Platform products.*
   b. Enter a Project name and Project ID, and click **Create** (FIG. 24):

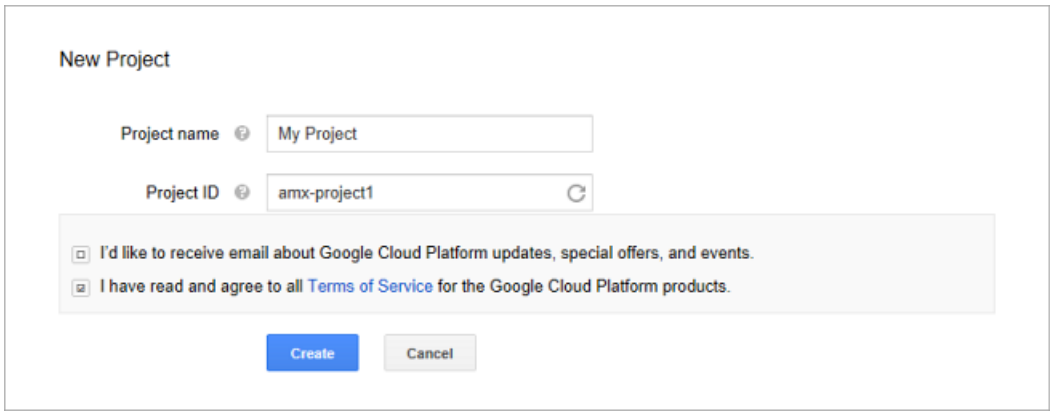

FIG. 24 Google Developer's Console - New Project

NOTE

The Project ID can have lowercase letters, digits or hyphens and must start with a lowercase letter.

It may take few seconds for the project to be created.

4. Once the project is created click on **APIs & Auth** in the left panel.

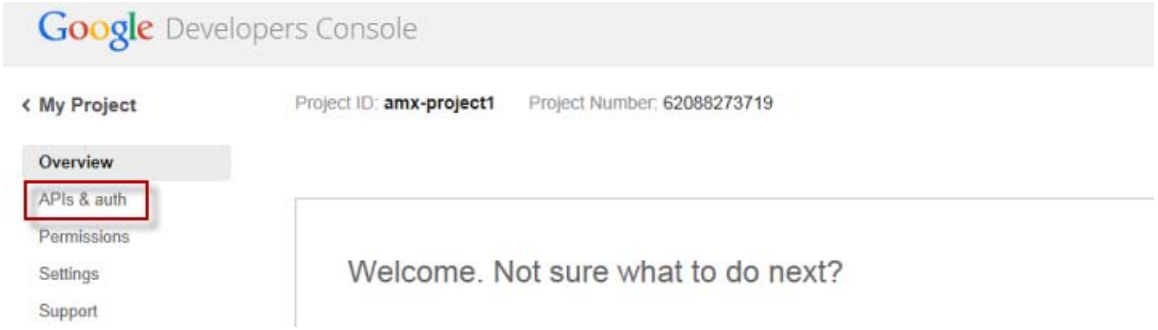

FIG. 25 Google Developer's Console - Overview > API's & auth option

5. This invokes a listing of Google API's. Locate **Calendar API**, and click the OFF button in the *Status* column to switch to ON status (FIG. 26).
   a. In the *Enable the Calendar API* window, click on *I have read and agree to both Google APIs Terms of Service and Calendar API Terms of Service*.
   b. Click **Accept** to proceed.

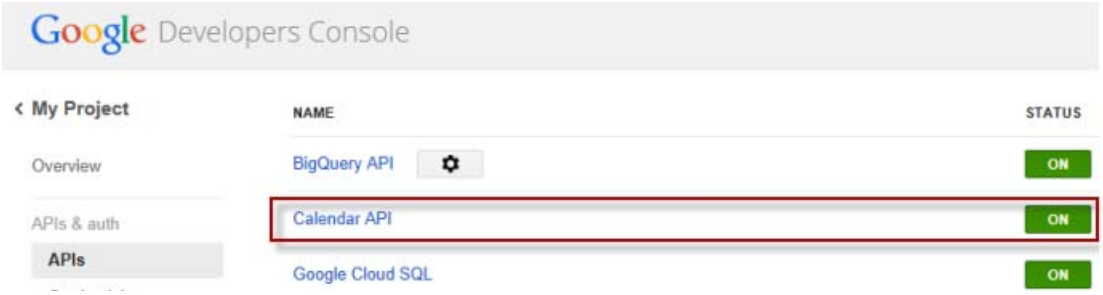

FIG. 26 Google Developer's Console - Calendar API: Status ON

6. In the left panel, click on **Credentials** (under *APIs*), then click **CREATE NEW CLIENT ID** (FIG. 27).

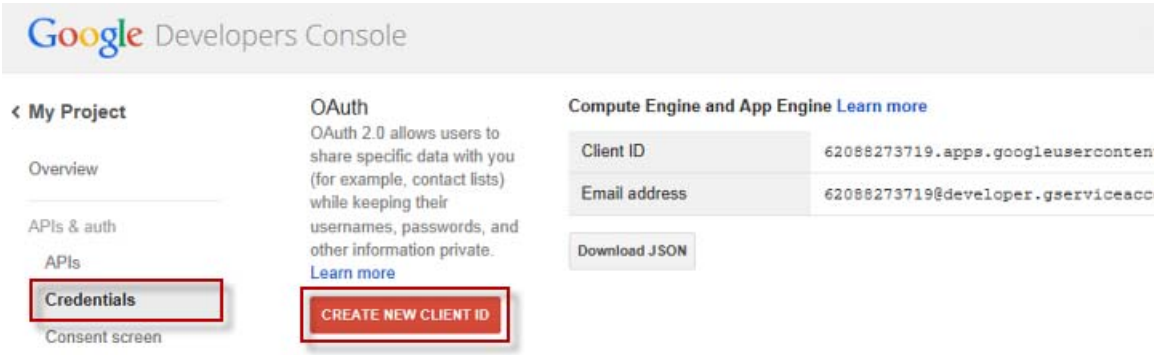

FIG. 27 Google Developer's Console - Overview > API's & auth > Credentials

7. In the *Create Client ID* window, select **Service Account** and click **Create Client Id** (FIG. 28):

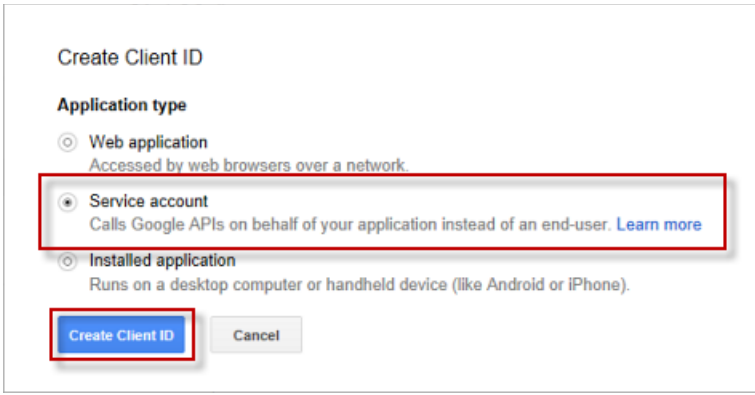

FIG. 28 Google Developer's Console - Create Client ID (Service Account)

8. At this point you will see a download prompt for the Google-generated private key (FIG. 29):

FIG. 29 Download the Google-generated private key

- Save this (*.p12) file to a safe location. This key will be a required entry for the RMS scheduling configuration process (in the RMS Enterprise Scheduling Configuration tool *Google Settings* tab - see FIG. 16 on page 12.
- Record the password provided in the *New Public/Private key pair generated* window - it will be required in order to use the private key, and it won't be displayed again once this window is closed.

NOTE

This "private key" is referred to as the "Google Signed Certificate" in the RMS Enterprise UI.

9. Once the private key file is downloaded click **Okay, got it** (FIG. 30):

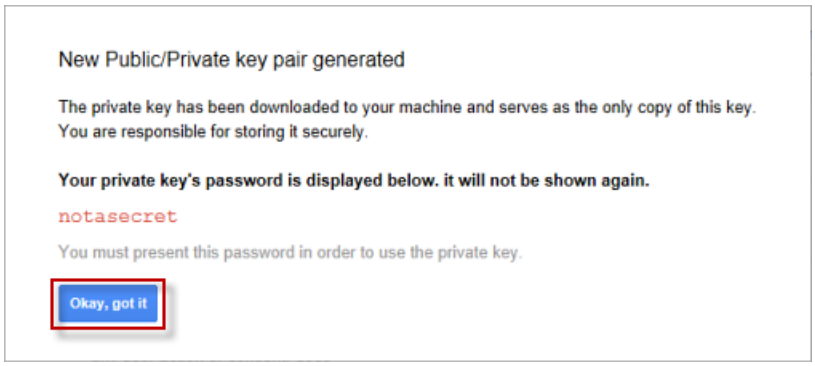

FIG. 30 Google Developer's Console - New Public/Private key pair generated window

10. The *Compute Engine and App Engine* window is invoked, providing the service account details such as Client ID, Email address and public key fingerprints (FIG. 31):

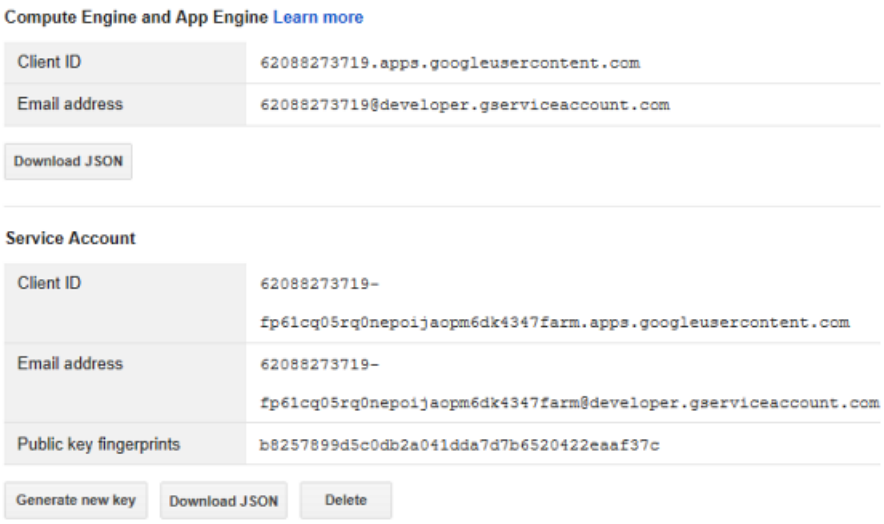

FIG. 31 Google Developer's Console - Compute Engine and App Engine window

NOTE

*The **Email address** is the "Google Email Account" that will be used for RMS scheduling configuration (see FIG. 16 on page 12).*

Known Issues

This section provides information on known issues relative to the RMS Enterprise Interface for Google.

Resources (Locations) not appearing in the Resource Profiles tab

In order to get the resources to show up in the Resource Profiles tab, each resource has to be "shared" with the Google services account provided in the Google settings.

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