

Push notifications for learning nuggets

imc Learning Suite

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1 Introduction

Learning nuggets have proven to be an efficient way of providing learners with information without overwhelming them with long training materials.

By introducing the possibility to send push notifications to the learner's mobile device when a new learning nugget is added to the course or becomes available based on scheduling, the learning material can be introduced to the learner gradually and at key moments throughout the day, to facilitate a good and efficient learning experience.

2 Configuration

2.1 Firebase configuration

In order to configure the learning app to work with push notification, a Firebase project is required. This can be created by accessing <https://console.firebase.google.com/>

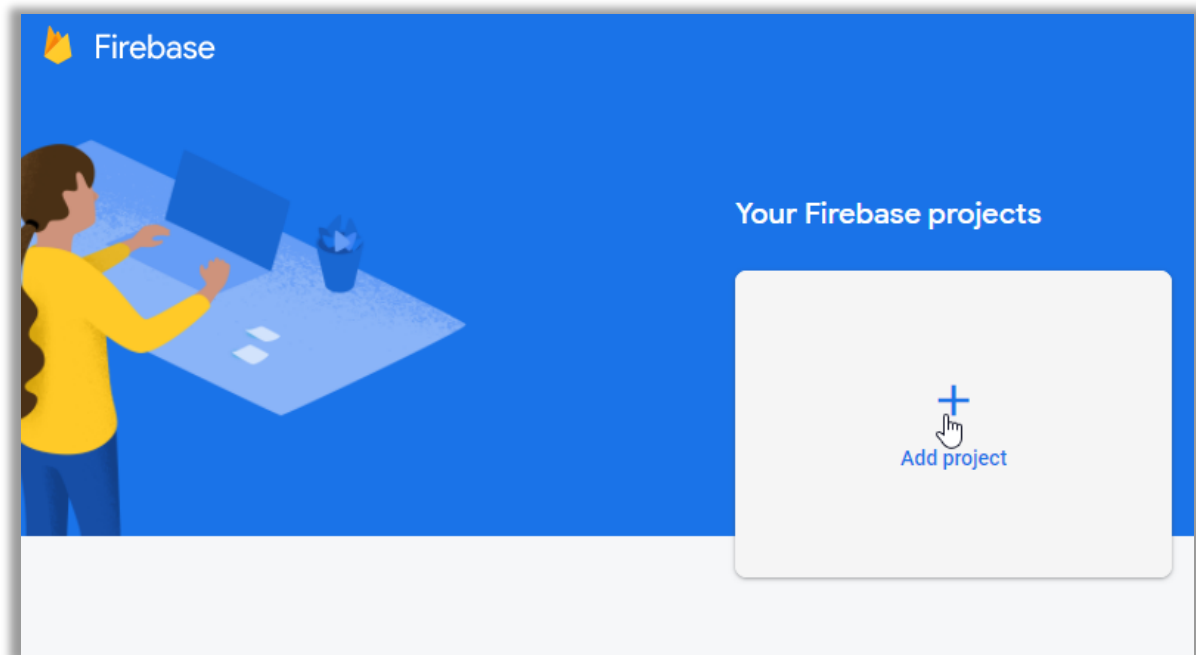


Fig. 2.1: Firebase: Add project.

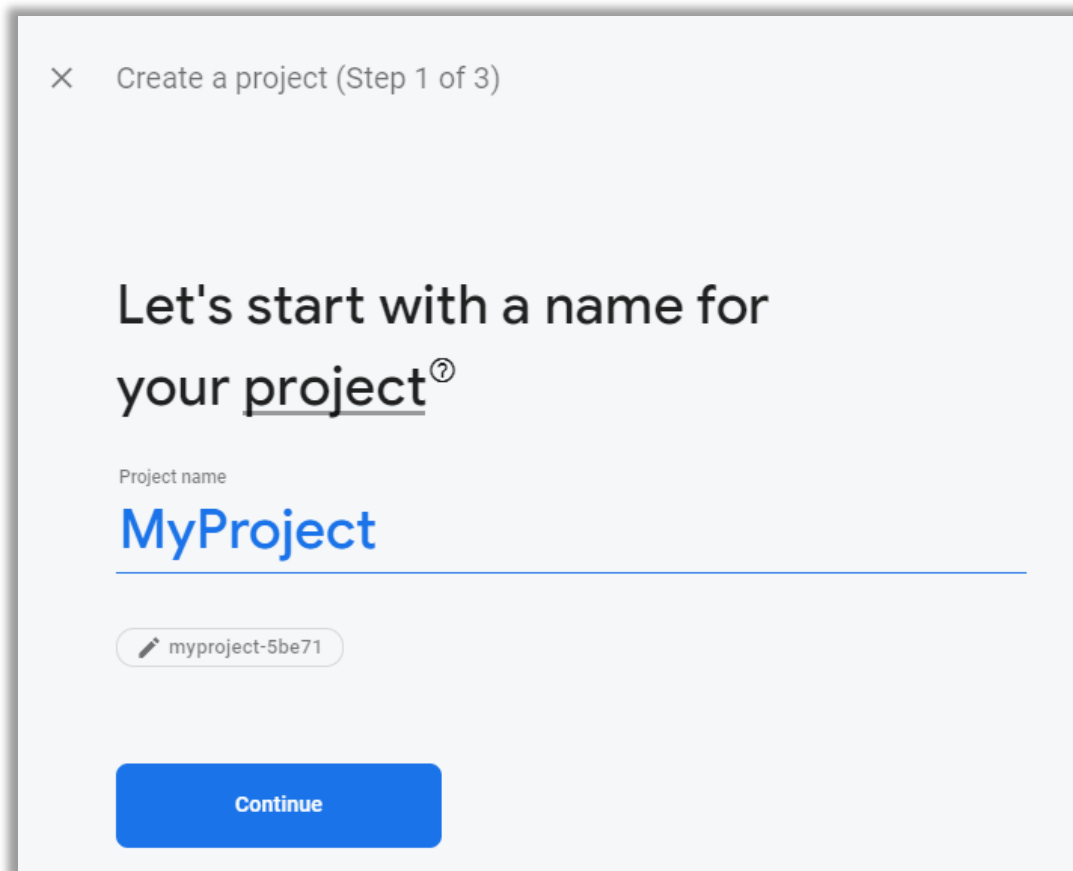


Fig. 2.2: Firebase: Create a project.

After creating a project, navigate to project settings and add the apps. Here it is possible to add an Android and an iOS app.

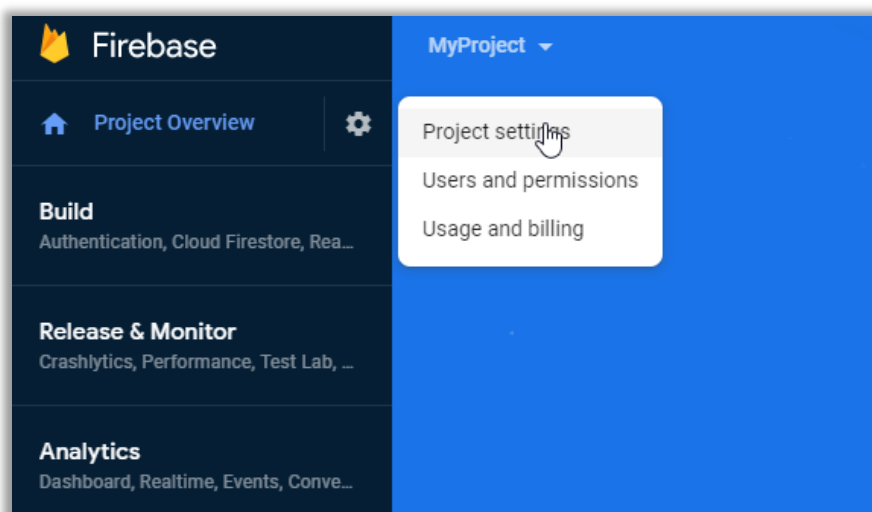


Fig. 2.3: Firebase: Select Project settings.

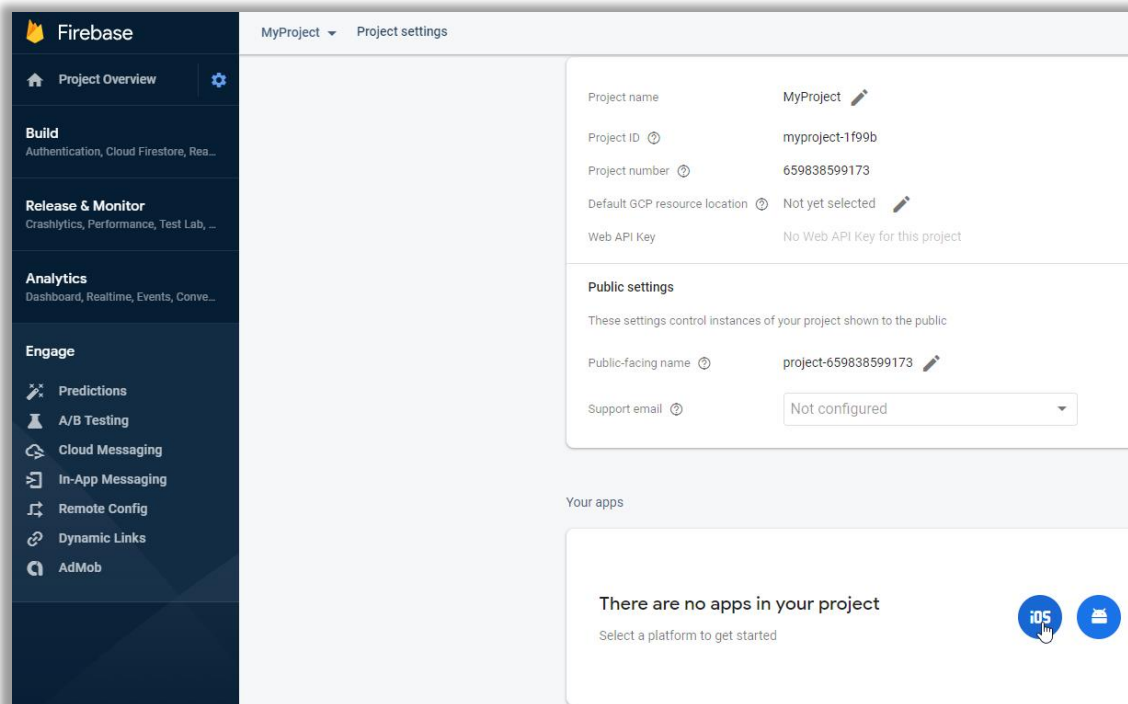


Fig. 2.4: Firebase: Project settings.

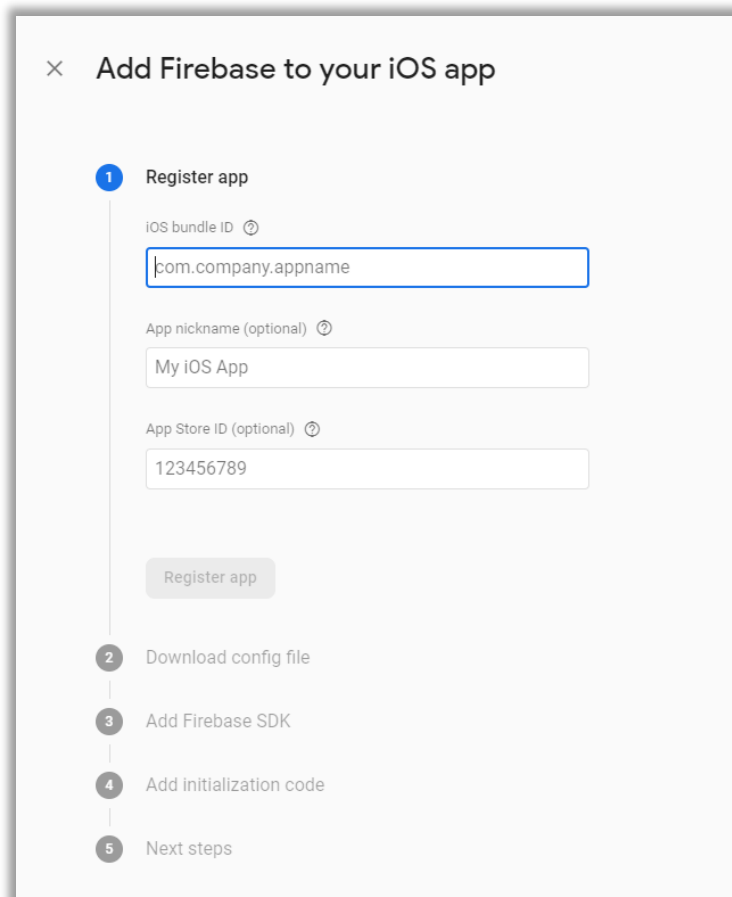


Fig. 2.5: Firebase: Register app.

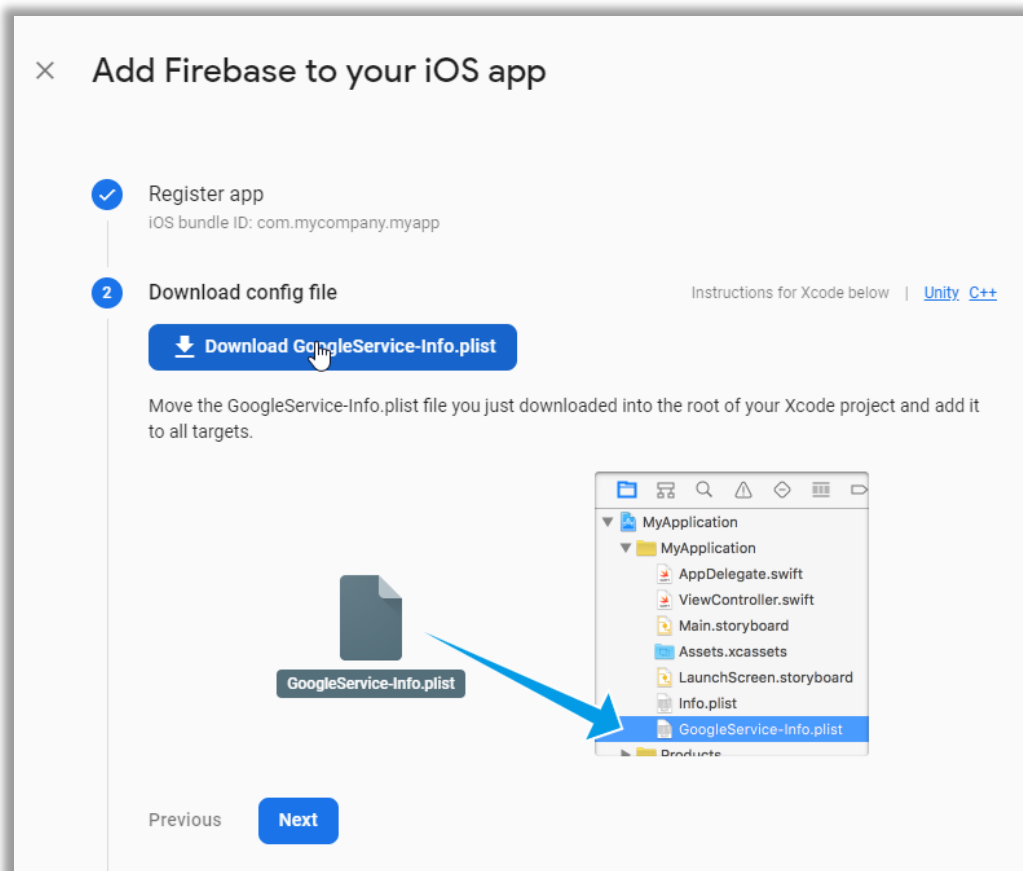


Fig. 2.6: Firebase: Download config file.

Note

For the iOS app, in the Cloud messages section, the APNS key must be provided. This key can be obtained via the apple developer account of the customer. Alternatively, imc can generate keys on demand. This aspect must be analyzed based on the project.

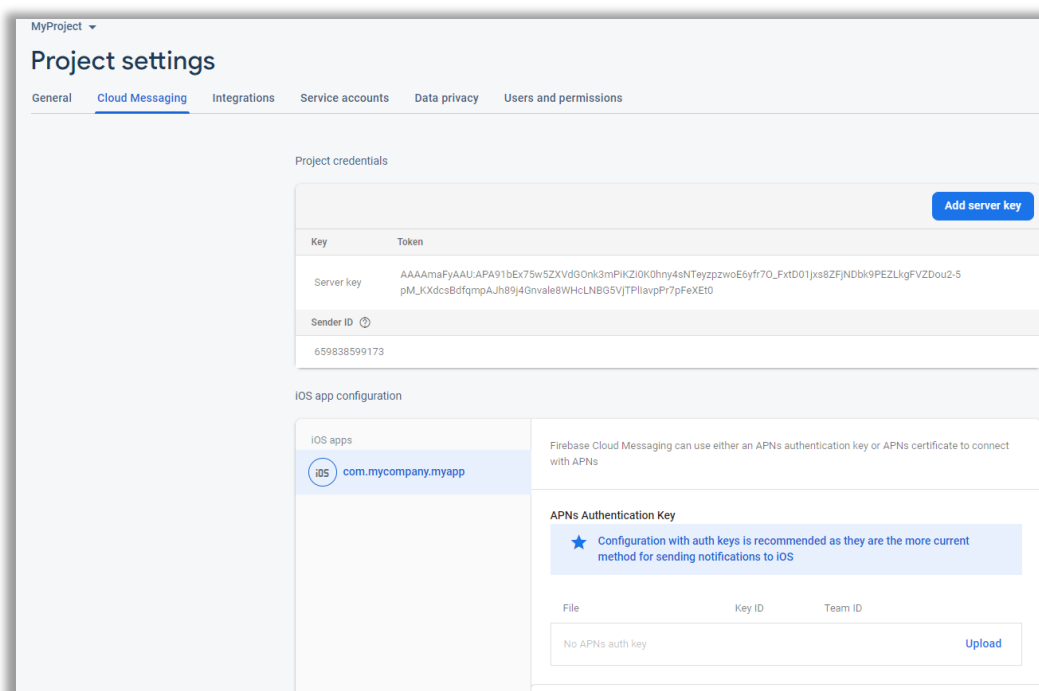


Fig. 2.7: *Firebase: Cloud Messaging.*

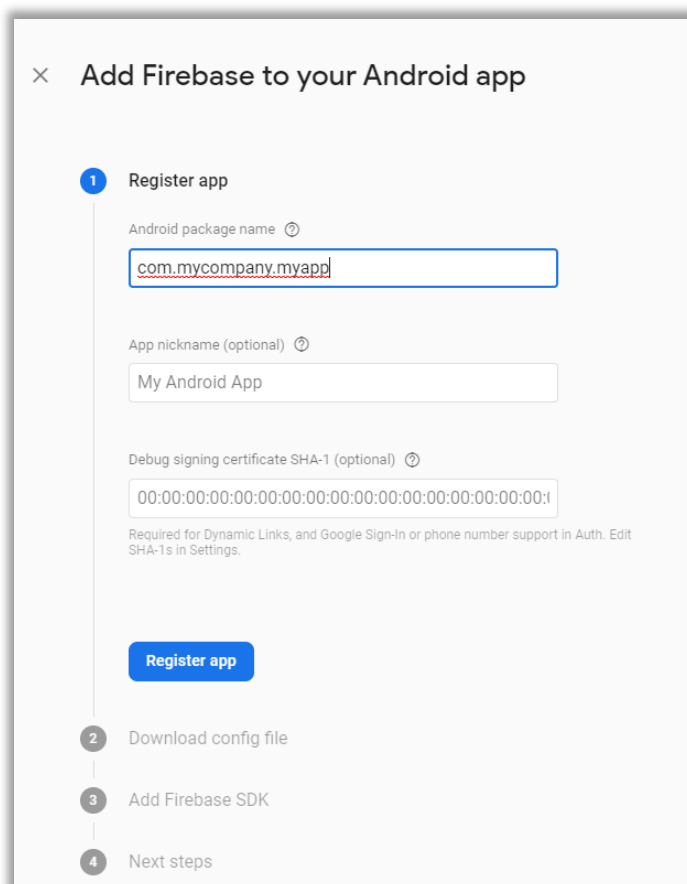


Fig. 2.8: *Firebase: Register app.*

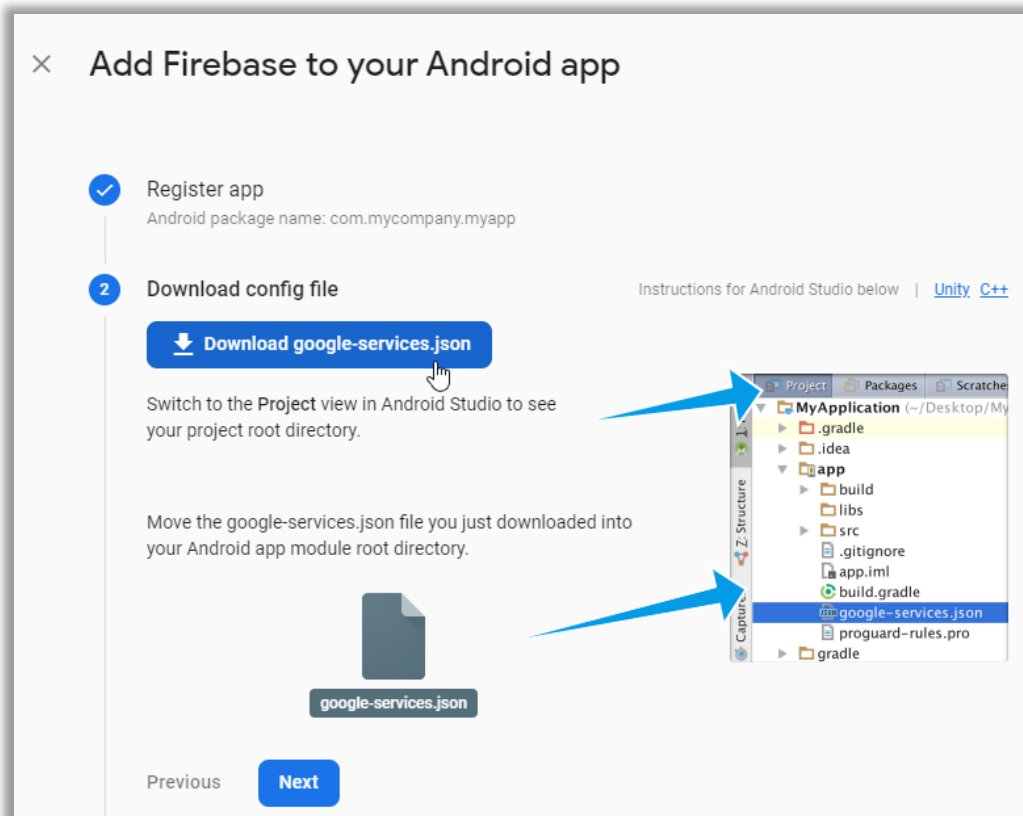


Fig. 2.9: Firebase: Add Firebase to your Android app.

After adding the apps, download the GoogleService-Info.plist file (for iOS) and the google-services.json (Android).

2.2 Mobile app configuration

The files obtained from Firebase, for Android and iOS, must be added in the clien_design folder so that they can be fetched at runtime by the mobile app in order to register the app with Firebase.

For example

/client_design/<design_name>/google-services.json

and

/client_design/<design_name>/GoogleService-Info.plist

2.3 ILS system configuration

The following section must be provided as part of the systemintegration.xml configuration file:

```
<Mobile>
  <PushNotification>
    <Firebase
      serverKey="AAAAmAKl508:APA91bES6StrEgruPnZqGuU8fwupD-YrYnzOu
      PhrFglaSIqAzOWZ4voydQNaCDSJnqpsQkw1Ioz8vMXwLgQff7d-Qt4j2l-
      zcV7diI3_f_Kg_JpVG9txcQMBG4hM9BFnYeoPwm9Jlzbv"/>
    </PushNotification>
  </Mobile>
```

Starting with version 14.10, this configuration is moved to the Configuration manager, in a dedicated area called Push notifications.

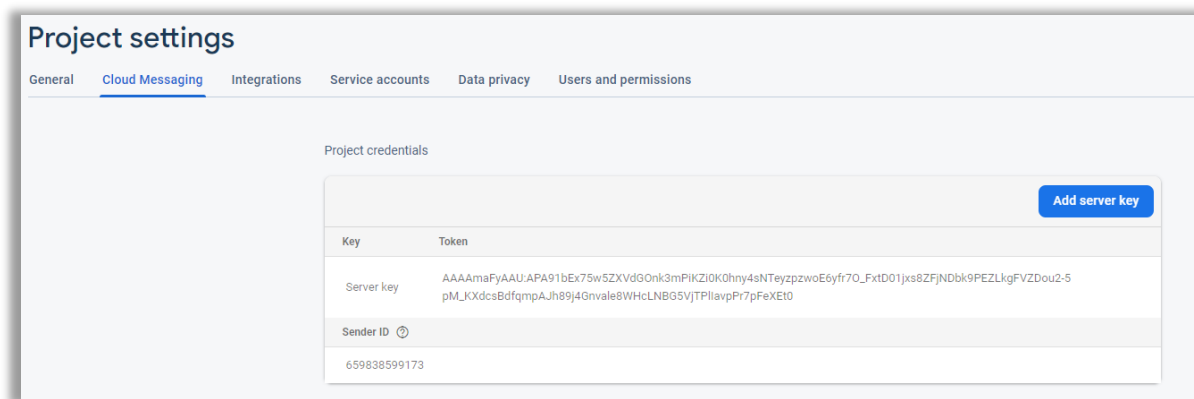


Fig. 2.10: Configuration in the Project settings.

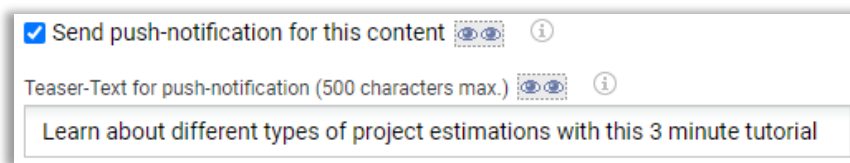
The certificate files obtained from the corresponding service must be added to the specified path on the certificatePath attribute.

2.4 Notification configuration

2.4.1 Configure push notification text for the media elements

Media elements can be enabled for push notifications via a checkbox meta tag: ID 11561.

Additionally, a teaser text must be provided so that the text can be displayed to the learner when receiving the notification. The teaser text is limited to 500 characters. (ID:11560)



☒ Send push-notification for this content

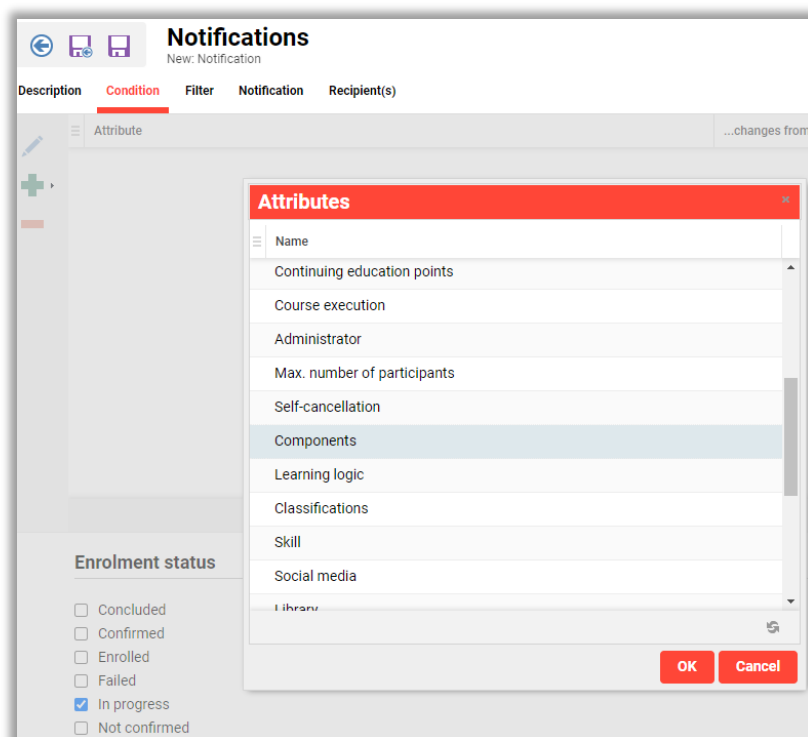
Teaser-Text for push-notification (500 characters max.)

Learn about different types of project estimations with this 3 minute tutorial

Fig. 2.11: Teaser text.

2.4.2 Notification on new media available in a course

On the notification level, for user defined notifications when the condition is set depending on new media being added to the course, push notifications can be enabled and will be sent out to the learner's registered mobile device.



Notifications
New: Notification

Description Condition Filter Notification Recipient(s)

Attribute ...changes from:

Attributes

- Name
- Continuing education points
- Course execution
- Administrator
- Max. number of participants
- Self-cancellation
- Components
- Learning logic
- Classifications
- Skill
- Social media
- Library

Enrolment status

- ☐ Concluded
- ☐ Confirmed
- ☐ Enrolled
- ☐ Failed
- ☒ In progress
- ☐ Not confirmed

OK Cancel

Fig. 2.12: Condition tab on Notification level.

After defining the condition (in this case changes to Components, which can be added via *Add attribute*), the push notifications must be enabled for this notification.

The screenshot shows the 'Notifications' form with the 'Notification' tab selected. The form includes a note about mandatory fields, an 'Upload file' section with a 'No file uploaded' message and 'Upload'/'Delete' buttons, and several text input fields for 'Sender's e-mail address', 'Sent from (alias)', 'Reply to e-mail address', and 'E-mail address for undeliverable e-mails'. At the bottom, there are two checked checkboxes: 'Use provider-specific e-mail settings' and 'Send push notification'.

Fig. 2.13: Notifications.

For the recipient configuration, the Participants will need to be configured. Push notifications, when enabled, will only be sent to the participants in the course.

The screenshot shows the 'Notifications' form with the 'Recipient(s)' tab selected. It features a 'Dispatching mode' section with two radio buttons: 'Send messages automatically' (selected) and 'Send messages manually (Administrator has to release the messages)'. Below this is a 'Send notification to the following addressees' section with a list of checkboxes. The 'Participant' checkbox is checked, while others like 'Supervisor', 'ADA second email', 'Email', 'All tutors', 'Course manager', 'Tutor', 'Trainer', 'Expert', 'Guest instructor', and 'Administrator' are unchecked.

Fig. 2.14: Notifications: Recipients.

After saving the notification, the notification can be enabled for all objects.

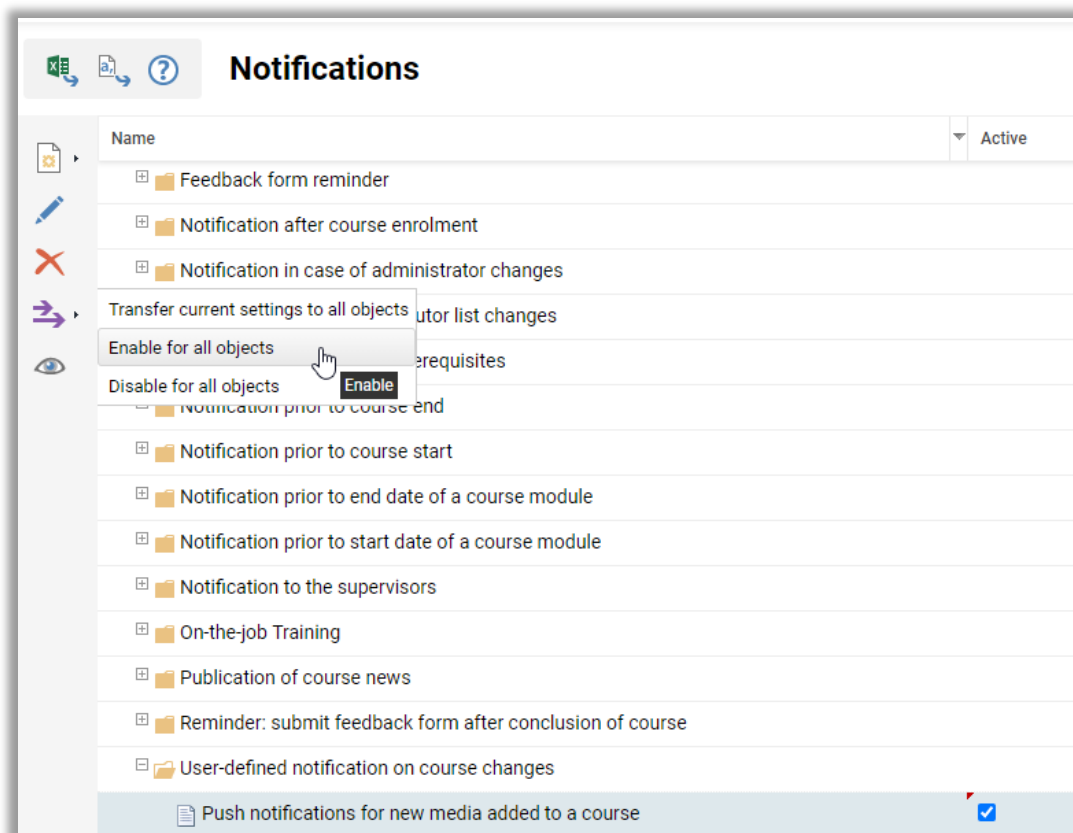


Fig. 2.15: Notifications: Enable for all objects.

Once the above steps are completed:

- Media is configured with enabled push notifications and teaser text
- Notification is configured for Component changes and activated for the course

then as soon as a new media is added to the syllabu of the course, the learners which have the specified enrollment status based on the notification setup will receive a push notification on their device. (This assumes that the participant has the app installed on their device and has logged in to the app previously)

The notification will display the teaser text configured at the media level and when this text is missing, the teaser configured at the notification level will be used.

2.4.3 Notification prior to start date of a media element

When scheduling media in the syllabus of the course, it is also possible to send a push notification as soon as the media becomes available. For this purpose, a cronjob must be configured to run and collect all the scheduled notifications for the timeframe in which it runs.

The cron job processor is

```
de.imc.clix.comp.notification.push.schedule.PushNotificationSchedulerJob
```

Similar to the scenario of sending notifications as soon as a new media element is added to the course, for this scenario, the Notification prior to start date of a course module must be setup to allow push notifications.

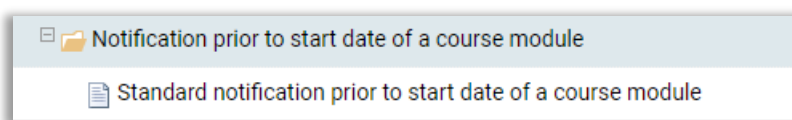


Fig. 2.16: Notification prior to start date of a course module.

Notifications
Edit Standard notification prior to start date of a course module (Notification 12) saved: 28-Jan-2021

Description	Condition	Filter	Notification	Recipient(s)
<p>Note: Mandatory fields are marked with an asterisk (*).</p> <p>Upload file ⓘ No file uploaded Upload Delete</p> <p>Sender's e-mail address ⓘ <input type="text"/></p> <p>Sent from (alias) ⓘ <input type="text"/></p> <p>Reply to e-mail address ⓘ <input type="text"/></p> <p>E-mail address for undeliverable e-mails ⓘ <input type="text"/></p> <p><input checked="" type="checkbox"/> Use provider-specific e-mail settings ⓘ</p> <p><input checked="" type="checkbox"/> Send push notification ⓘ</p>				

Fig. 2.17: Notifications: Upload.

3 Learner experience

When a push notification is received by the learner's device, the notification will be displayed in the notification drawer if the app is closed or minimized and will be displayed in-app if the app is already open.

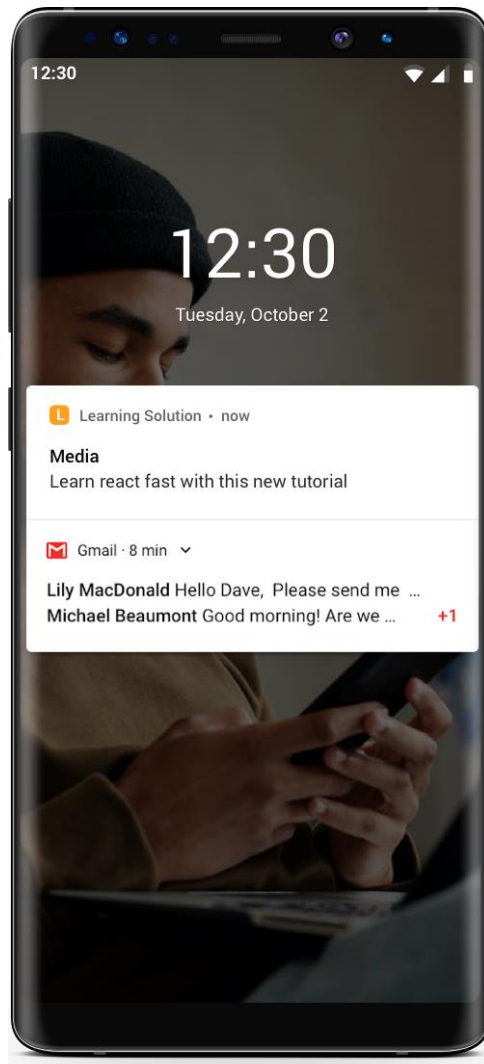


Fig. 3.1: Push notification on a learner's device.

The notification will show the text as configured for the media element and will be displayed in the preferred working language of the user.

When seen in the notification drawer, the notification can be selected and the app will open, triggering a download and an open of the media element, as long as the media is accessible. When the app is already open and a notification arrives, it will be displayed as an overlay. The user can confirm and open the media or can dismiss the notification via the cancel option.

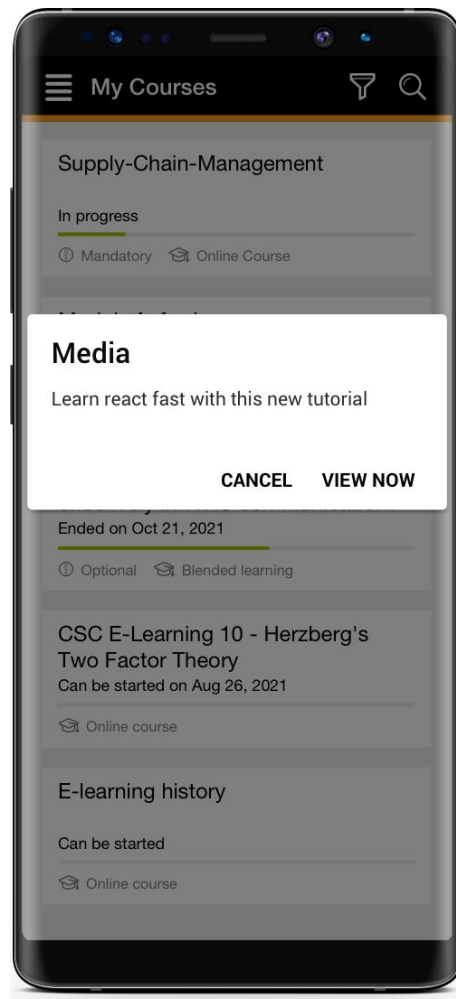


Fig. 3.2: Download media on a learner's device.

During the download of the media, a progress bar is displayed to inform the user about the download status.

4 Out-of-Scope



No other notifications are available as push notifications besides those already specified as part of this document.

5 Effects on other components



No effects on other components.

6 Data migration



No data migration necessary.

7 Data protection and security



No impact on data protection and security