

Objective:

This document is prepared to help our partners in testing an integration of their app, which includes location-based messaging, with the Larky nudge® library.

Should you have questions or require assistance at any time, or if your integration does **not** include location-based messaging, please reach out to us at support@larky.com and we will get back to you promptly.

Test Summary:

Below are the test cases covered in this guide:

Test Case 1:

*App users should be able to complete the **nudge initialization** successfully by being provided access to the **OS notification and location permission prompts**.*

Test Case 2:

*App users should be able to **receive a scheduled notification** after **the device has been restarted**.*

Test Case 3:

*App users should be able to **receive a notification**, and on **tapping** the notification, the **URL associated with that notification should be launched in a mobile browser**.*

Condition 1:

*Before tapping the notification, the app user will make sure that the **app is opened and running in the background**.*

Condition 2:

*Before tapping the notification, the app user will make sure that **the app is not opened or running in the background and the device is screen locked**.*

Test Case 4:

*Portal users should be able to **validate the analytics data** in the portal for the **notifications received and tapped** by the app user.*

Test Assumption:

Listed below are the assumptions for an effective usage of this document:

- The app does not initiate its own call to location services before the larky initialization

If your app *does* initiate its own location services, please contact us so we can work with you to modify these tests.

Test Requirement:		
Before starting your app integration testing with Larky library, make sure to complete below actions: Note: <i>Contact us for any blocker or clarifications.</i>		
1. Create a new location in Larky nudge portal site		
Step #	Action	Description
1.1.	Login to Larky Nudge portal site URL: https://nudge.larky.cloud/login	
1.2.	Navigate to “Create a location” from “Locations” menu	
1.3.	Provide the location address in “Type your location” field	Provide the address where you are planning to test the GEO location nudge.
1.4.	Provide a name in “Name your location” field	This is an identifier for your reference and will be found during creation of geolocation nudge. (Example: QA Location1)
1.5.	Provide a description in “Give your location a description” field	
1.6.	Click “Add Location” button	New location will be listed in “My locations” page
2. Create a GEO location nudge in Larky nudge portal site		
Step #	Action	Description
2.1.	Navigate to “Create a nudge” from “Nudges” menu	
2.2.	Click “Geolocation” option button	
2.3.	Provide a name for the nudge in “Name your nudge” field	This is an identifier for your reference.
2.4.	Provide a description for the nudge in “Give your nudge a description” field	
2.5.	Select a category from “Select a category for your nudge”	
2.6.	Provide a title for the nudge in “Give your nudge a title”	This will be the title for the notification itself
2.8.	Provide a message for the nudge in “Write your nudge message”	This will be the body for the notification.
2.9.	Provide an URL for the nudge in “Provide the destination for when the nudge is tapped”	The weblink URL will be launched on a mobile browser when the app user taps on the nudge that is received. Note: If you want to use a deep-link URL, please contact support@larky.com for assistance. We can enable it for your app environment, and you can make the selection within the URL Type dropdown.

2.10.	Select “ All possible recipients ” from the “ Select the recipients for your nudge ” dropdown	It will target all the devices that have a larky integrated app installed and initialized.
2.11.	Select the location created above from “ Select one or more locations ” dropdown	For example, select “ QA Location 1 ” that was created as part of requirements
2.12.	Select the proximity from “ Choose how close users should be to the location(s) ” dropdown	Example: “ About 1 block radius ”
2.13.	Select the duration from “ How long should recipient be at location before nudge is delivered? ”	For testing, select “ Deliver immediately ”
2.14.	Select “ Today ” checkbox for “ Starting ” field	It will let the system start sending notifications from the current date.
2.15.	Select “ Never ” checkbox for “ Ending ” field	It will let the nudge remain active forever.
2.16.	Select “ Every Day ” checkbox for “ Add active window(s) ”	
2.17.	Select “ All Day ” checkbox for time to send nudges	
2.18.	Select “ once an hour ” option from “ Select maximum frequency ”.	This will trigger geo nudge every hour. Note: This option is only available in non-production environments
2.19.	Select “ Yes ” from “ Override message capping limits? ”	This will avoid checking the message capping limits.
2.20.	Click the “ Create this nudge ” button	A new Geolocation nudge will be created and made active.

Test Cases:

Test Case 1:

App users should be able to complete the nudge initialization successfully by being provided access to the notification and location permissions.

Pre-requisite:

- Completed test requirement actions.
- Performed a fresh installation of the mobile app that is integrated with Larky nudge library.

Test Steps:

1. Notification Permission settings validation

For iOS devices (all versions) and Android devices (Android version 13 and above)

Step #	Action	Expected Result
1.1.	Open the app and verify: • Notification permission popup is displayed. Note: Notification permission popup will not show up for Android devices with versions below 13. It will be allowed internally.	App should be opened, and the notification permission popup should be displayed (based on the type of device and version of OS).
1.2.	Select “ Allow ” to receive the notification	• Notification permission should be allowed.

2. Location Permission settings validation

2.1. Location Permission settings validation for iOS devices

Note: If you are testing Android devices, proceed to step 2.2

Step #	Action	Expected Result
2.1.1.	• Verify that a prominent disclosure popup appears after the notification permission is allowed. • Select “OK” from the prominent disclosure popup and verify: ○ OS location permission popup is displayed. Note: The prominent disclosure popup should be shown either immediately after notification permission popup OR after logging in to the application based on the implementation.	• On selecting “OK” the disclosure popup should be dismissed. • App should show a location permission popup.
2.1.2.	From the location permission popup, select “ While using the app ”	Location permission should be set to “ While using the app ”.

2.2. Location Permission settings validation for Android versions 13 and above

Note: If you are testing Android versions below 13, proceed to step 2.3

Step #	Action	Expected Result
2.2.1.	- Verify that a prominent disclosure popup appears after the notification permission is allowed. - Select "OK" from the prominent disclosure popup and verify: - Location permission popup is getting displayed. Note: <i>The prominent disclosure popup should be shown either immediately after notification permission popup OR after logging in to the application based on the implementation.</i>	- On selecting "OK" the disclosure popup should be dismissed. - App should show the OS location permission popup.
2.2.2.	- Select "While using" from the OS location permission popup and verify: - A location sharing disclosure popup is getting displayed asking the user to set the location permission to "Always allow" with an "OK" button	- Users should be able to select the "While using" option from the location permission popup. - On selecting the permission, the app should show a disclosure popup with an "OK" button.
2.2.3.	- Select "OK" from the location sharing disclosure popup and verify: - Device OS location permission settings should be opened	- On selecting "OK" the disclosure should be closed. - Users should be navigated to device OS location permission settings view.
2.2.4.	- From the Settings view, select "Always allow" and select the "Back" button to go back to the app. OR - After setting the permission, re-launch the app.	Users should be able to set the location permission.
2.3. Location Permission settings validation (Android versions below 13)		
Step #	Action	Expected Result
2.3.1.	- Verify that a prominent disclosure popup appears. - Select "OK" from the prominent disclosure popup and verify: - OS location permission popup is getting displayed. Note: <i>The prominent disclosure popup should be shown either immediately after opening the app OR after logging in to the application based on the implementation.</i>	- On selecting "OK" the disclosure popup should be dismissed. - App should show the OS location permission popup.

2.3.2.	Select “ Allow ” or “ Always allow ” from the location permission popup	Users should be able to set the location permission.
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3. Federation ID Validation		
Step #	Action	Expected Result
3.1.	Logon to the app	Your app should send the federation ID to the Larky system once the user authenticates. This can be verified in the export analytics csv file after you receive a nudge from Larky. Note: Refer Test Case 4

Test Case 2:

App users should be able to receive a scheduled notification after the device has been restarted.

Pre-requisite:

- All the test requirements are completed.
- Mobile app is installed on the device and nudge initialization is completed. (Ref: *Test Case 1*)
- **⚠ CRITICAL:** This test should only be performed on a test environment, NEVER for an app that is in production for a client. If you are at all unsure about the status of the nudge® Portal organization in which you are creating the nudge® message in *Step 2* below, please contact support@larky.com for assistance

Test Steps:

1. Restart the device after removing the app from background (Carousel) (For iOS and Android devices)

Step #	Action	Expected Result
1.1.	• Clear the app from background (Carousel) • Restart the device • After successful reboot, unlock the device • Do not re-open the app	

2. Trigger a time-based (scheduled) nudge

Step #	Action	Expected Result
2.1.	Navigate to “ Create a nudge ” from “ Nudges ” menu	
2.2.	Click “ Time-based ” option button	
2.3.	Provide a name for the nudge in “ Name your nudge ” field	This is an identifier for your reference.

2.4.	Provide a description for the nudge in “ Give your nudge a description ” field	
2.5.	Select a category from “ Select a category for your nudge ”	
2.6.	Provide a title for the nudge in “ Give your nudge a title ”	This will be the title for the notification itself
2.7.	Provide a message for the nudge in “ Write your nudge message ”	This will be the body for the notification.
2.8.	Provide an URL for the nudge in “ Provide the destination for when the nudge is tapped ”	The weblink URL will be launched on a mobile browser when the app user taps on the nudge that is received. Note: If you want to use a deep-link URL, please contact support@larky.com for assistance . We can enable it for your app environment, and you can make the selection within the URL Type dropdown.
2.9.	Select “ All possible recipients ” from the “ Select the recipients for your nudge ” dropdown	It will target all the devices that have a larky integrated app installed and initialized.
2.10.	Select “Schedule nudge for right now” check box for “ Set the date and time when your nudge should begin sending ”	
2.11.	Select “ Yes ” from “ Override message capping limits? ”	This will avoid checking the message capping limits.
2.12.	Click the “ Create this nudge ” button	⚠️ A confirmation dialog will appear indicating the number of recipients for this message. If the number is large, STOP and contact support@larky.com for assistance . It is possible you are in a client production environment. Proceeding with this test will result in ALL account holders receiving your test notification.
2.13.	Click on the “ Continue ” button from the confirmation popup	A new time-based nudge will be created
3. Receive the scheduled (time-based) nudge in the device		
Step #	Action	Expected Result
3.1.	Make sure you receive the nudge on your device.	

Test Case 3:

App users should be able to receive a notification and on tapping the notification, the URL should be launched in a mobile browser.

Condition 1:

*Before tapping the notification, app user will make sure that the **app is opened and running in the background***

Pre-requisite:

- All the test requirements are completed.
- Delete the mobile app if it's already installed.

Test Steps:**4. Receive and tap notification validation – app is running in carousel/background**
(For iOS and Android devices)

Step #	Action	Expected Result
1.1.	Install and open the app	Installation should be successful • Notification and location permission should be allowed
1.2.	Provide the notification and location permission <i>(for steps, please refer Test Case 1)</i> and verify: • Geolocation notification is received. • Mobile app is still running.	• Notification should be received after the location permission is allowed. The notification should show the expected content. • Mobile app should be running as expected.
1.3.	Select / Tap on the notification received and verify: • Default mobile browser is opened and the site for the URL is launched. • Mobile app is running.	• On tapping the notification, mobile browser should be opened, and the URL set during nudge creation should be launched. • Mobile app should be running as expected.

Test Case 3:

App user should be able to receive the notification and on tapping the notification, the URL should be launched in a mobile browser.

Condition 2:

*Before tapping the notification, app user will make sure that **the app is closed or not running in the background (carousel) and the device screen is locked.***

Pre-requisite:

- All the test requirements are completed.
- Delete mobile app that is integrated with Larky nudge library, if it's already installed.
- Set the notification and location permission (refer Test Case 2 for details)

Test Steps:

1. Receive and tap notification validation – app is not running in the carousel and device screen is locked. (For iOS and Android devices)		
Step #	Action	Expected Result
1.1.	Install and open the app	● Installation should be successful. ● Notification and location permission should be allowed.
1.2.	Provide the notification and location permission (for steps, please refer Test Case 1) and verify: ● Geolocation notification is received. ● Mobile app is running.	● Notification should be received after the location permission was allowed. ● Mobile app should be running as expected.
1.3.	Before tapping the received notification: ● Make sure that you do not have the app in the background or carousel. Note: the following steps to clear the app from background may differ based on the version of app or type of device you are using: ● From the Home Screen, swipe up from the bottom of the screen and pause in the middle of the screen. ● Swipe right or left to find the app that you want to close. ● Swipe up on the app's preview to close the app. Screen lock the device.	● No app should be running in the background/carousel. ● The device should be locked, and the user can view the received notification from the lock screen.
1.4.	From the lock screen, select / tap on the notification received	Device should ask the user to unlock the device
1.5.	Unlock the device using PIN or biometrics and verify: ● Mobile browser is opened and the site for the URL (defined in the nudge) is getting launched.	Default mobile browser should be opened and the site for the URL should be launched

Test Case 4:

Portal user should be able to validate the analytics data in portal for the notifications received and tapped by the app user.

Pre-requisite:

- All the test requirements are completed.
- Test case 3 is completed.

Test Steps:

1. Nudge analytics validation

Step #	Action	Expected Result
1.1.	Login to Larky Nudge portal site URL: https://nudge.larky.cloud/login	Users should be able to login successfully. User should be navigated to “ Dashboard ” page
1.2.	From the Dashboard , click the “ Export Analytics ” button.	User should be able to download a CSV file
1.3.	Navigate to “ My Downloads ” from “ My Account ” menu	User should be able to view all available downloads.
1.4.	Select the “ Download ” button adjacent to the appropriate file	File should be downloaded.
1.5.	Open the downloaded file and validate the CSV export file for the nudge received, tapped and federation ID	User should be able to view the analytics for the nudge received and tapped. User should be able to view the federation IDs of devices/users that received the nudge.