



Legacy VoIP Mode and Apple Push Notification Service Updates in iOS 13

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Description

In iOS 13, Apple has made updates to the way applications in background mode are notified of incoming calls and messages, in order to preserve battery life. This change will impact users of Cisco Jabber and Webex Teams. To make sure that your system supports the Apple Push Notification service (APNs), you must upgrade your system to a supported release by the prescribed dates and enable APNs.

Background

How Apple Push Notification Service Works

While Cisco Jabber iOS clients are operating in foreground mode, Jabber maintains a persistent connection to Cisco Unified Communications Manager. However, when the Jabber client moves into background mode (this occurs after an interval where Jabber is not interacted with directly), iOS terminates Jabber, preventing Cisco Unified Communications Manager from contacting Jabber directly. This helps preserve battery life on Apple devices.

The Apple Push Notification service provides an alternative channel to clients that are in background mode. When Cisco Unified Communications Manager receives an incoming call for a client that is in background mode, Unified CM contacts the cloud-based Apple Push Notification service, which maintains a connection to the iOS device. The Apple Push Notification service sends a push notification to the device on which Jabber is installed. Upon receiving the push notification, Jabber re-enters foreground mode, reconnects to Cisco Unified Communications Manager, and receives the incoming call.

The following sections describe updates to the Apple Push Notification service and how Cisco products will be affected.

1. Legacy VoIP Mode is no longer supported for Cisco Jabber after August 1, 2020

Jabber on iOS will no longer be able to leverage legacy VoIP sockets and APIs to receive calls and messages from Cisco Unified Communications Manager (UCM) and Cisco Unified Communications Manager IM and Presence Service.

The deprecation of the legacy VoIP sockets impacts Jabber functionality going forward. If your organization uses Cisco Jabber registered to Unified CM for calling and IM and Presence Service for messaging, Jabber will be unable to receive calls or messages while running in background mode, until APNs is enabled.

2. iOS 13 SDK Changes for Apple Push Notification service for Jabber and Webex Teams after April 1, 2021

With iOS 13, Apple has changed the way that Push Notifications are delivered to VoIP apps. This impacts the way that Webex Teams and Jabber receive calls and the way that Jabber receives messages.

Problem Symptom

Apple now requires that all VoIP push notifications invoke CallKit immediately. If a VoIP push notification is not reported to CallKit within a designated period, iOS terminates the application. If the Jabber or Webex Team client application fails to invoke Call Kit repeatedly, then Apple will stop delivering push notifications to the application.

Jabber and Webex Teams on iOS 13 will invoke CallKit when a VoIP notification is received. CallKit displays caller ID as “Unknown caller”. When the client reregisters and receives the SIP INVITE, CallKit replaces “Unknown caller” with the actual caller ID. The time it takes to reflect the actual caller ID depends on the quality of the connection between the client and Unified CM.

With the iOS 13 SDK, Apple also requires that non-VoIP push notifications, like messages, can’t use the VoIP channel for delivery. Messages must be delivered through the messaging channel. If non-VoIP services continue to use VoIP channels for push notifications, but fail to report notifications to CallKit, then iOS will terminate the application. If an application doesn’t invoke CallKit repeatedly, then Apple stops delivering push notifications to the application altogether.

Problem Symptom

1. Legacy VoIP Mode is no longer supported for Cisco Jabber after August 1, 2020

- Cisco Jabber iOS client application will be unable to receive calls or messages while running in background mode until APNs is enabled.

2. iOS 13 changes the Apple Push Notification service for Cisco Jabber and Webex Teams after April 1, 2021

- Cisco clients, Cisco Jabber or Webex Teams, running on iOS 13 will get a voice call notification that would show the CallKit with caller id as “Unknown Caller”.
- The Cisco client may be terminated, and Apple will stop delivering voice and messaging push notifications.

Workaround/Solution

Cisco has developed a solution that meets Apple Push Notification requirements. Cisco strongly recommends that you upgrade your UC infrastructure to a supported release prior to the prescribed dates and enable APNs.

Refer to the following table for recommended infrastructure migration schedule to ease the transition to the APNs updates.

NOTE: APNs is supported with both 11.5 and 12.5 versions of Unified CM. The upgrade recommendations differ depending on whether you plan to run an 11.5 or 12.5 version of Unified CM.

Table 1. Recommended APNs Migration Schedule

If you are running...	By August 1, 2020, do this...	By April 1, 2021, do this...
Cisco Unified Communications Manager and IM and Presence Service		
11.5(1)SU8 or higher	Enable APNs	If you want 11.5, nothing required If you want 12.5, upgrade to 12.5(1)SU3 or higher
11.5(1)SU4 - SU7	Enable APNs	If you want 11.5, upgrade to 11.5(1)SU8 or higher If you want 12.5, upgrade to 12.5(1)SU3 or higher

Additional Information

If you are running...	By August 1, 2020, do this...	By April 1, 2021, do this...
11.5(1)SU3 or earlier	If you want 11.5, upgrade to 11.5(1)SU7 (minimum) or 11.5(1)SU8 (recommended) and then enable APNS: If you want 12.5, upgrade to 12.5(1)SU2 or higher and then enable APNS	If you want 11.5, upgrade to 11.5(1)SU8 or higher If you want 12.5, upgrade to 12.5(1)SU3 or higher
Cisco Expressway		
NOTE: Expressway upgrades are mandatory ONLY if the deployment includes the IM and Presence Service.		
X8.10.1 or higher	Nothing required	Upgrade to Expressway X12.6 or higher
X.8.10 or earlier	With Unified CM 11.5, upgrade to Expressway X8.10.1 or higher With Unified CM 12.5, upgrade to Expressway X12.5 or higher (X12.6 is recommended)	Upgrade to Expressway X12.6 or higher
Cisco Jabber		
11.9	With Unified CM 11.5, upgrade to Jabber 12.8 or higher recommended (but not mandatory) With Unified CM 12.5, upgrade to Jabber 12.8 or higher	Upgrade to Jabber 12.9 or higher
11.8 or lower	Upgrade to Jabber 12.8 or higher	Upgrade to Jabber 12.9 or higher
Cisco Webex clients		
Webex Teams	Nothing required	Upgrade to latest version of Webex Teams app

NOTE: Refer to [Table 2](#) for information on release timelines

For information on how to upgrade Unified CM, refer to the latest *Upgrade and Migration Guide* at: https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/upgrade/12_5_1/cucm_b_upgrade-migration-guide-125x.html.

For information on how to enable and configure APNs, refer to the *Push Notifications Deployment Guide* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/push_notifications/cucm_b_push-notifications-deployment-guide.html.

Additional Information

Table 2. Release Timeline for APNs iOS13 Supported Versions

UC Application	Recommended Version	Release Timeline (Dates are subject to change)
Cisco Unified Communications Manager and IM and Presence Service	11.5(1)SU8	May 31, 2020
	12.5(1)SU3	July 31, 2020
Cisco Expressway*	X12.6	May 31, 2020
Cisco Jabber	12.9	June 25, 2020

For More Information

UC Application	Recommended Version	Release Timeline (Dates are subject to change)
Cisco Webex Teams Cisco Webex Calling App	Not Applicable	July 31, 2020

* Cisco Expressway upgrade is required ONLY if the deployment includes the IM and Presence Service.

For More Information

If you require further assistance, or if you have any further questions regarding this field notice, please contact the Cisco Systems Technical Assistance Center (TAC) by one of the following methods:

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