

C450HD IP Phone for Microsoft Teams

Version 0.281



Microsoft Partner

Gold Communications



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Related Documentation

Document Name
C450HD IP Phone for Microsoft Teams Quick Guide
C450HD IP Phone for Microsoft Teams User's Manual
https://docs.microsoft.com/en-us/MicrosoftTeams/phones-for-teams

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1 Introduction

This document describes the new features and known constraints of AudioCodes' C450HD IP Phone for Microsoft Teams. The phone's firmware version is 0.225 and the Microsoft Teams application version is 1.0.94.2019031201.

1.1 Overview

The AudioCodes C450HD IP phone is a native Microsoft Teams high-end executive business phone with a large color touch screen and full UC integration for the Native Microsoft Teams Online market.

The Microsoft Teams C450HD is equipped with a 5-inch color capacitive touch screen, 1280 x 720 resolution and optional integrated Wi-Fi and Bluetooth support (contact your local AudioCodes representative for more information about regional availability of Wi-Fi / Bluetooth).

The phone can be managed by the Microsoft Teams & Skype for Business Admin Center. For more information, see <https://docs.microsoft.com/en-us/MicrosoftTeams/phones-for-teams>.

The phone also features the option to be used as a Microsoft Skype for Business IP phone, offered as part of AudioCodes' Managed IP Phones solution which defines the IP phone as an IT-managed entity and delivers unique and complete lifecycle management of end-user desktop devices. A single-click switchover between Microsoft Teams with native client experience and Skype for Business is supported.

1.2 Specifications

The table below summarizes the software specifications of the C450HD IP Phone for Microsoft Teams.

Table 1-1: C450HD IP Phone for Microsoft Teams Software Specifications

Feature	Details
Media Processing	- Voice Coders: G.711, G.729, G.722, SILK Opus - Acoustic Echo Cancellation: G.168-2004 compliant, 64-msec tail length - Adaptive Jitter Buffer - Voice Activity Detection - Comfort Noise Generation - Packet Lost Concealment - RTP/RTCP Packetization (RFC 3550, RFC 3551), SRTP (RFC 3711)
Microsoft Teams phones feature set	- Authentication (Sign in with user credentials; Sign in using PC/Smartphone; Modern Authentication; Phone lock/unlock) - Calling (Incoming/Outgoing P2P calls; In-call controls via UI (Mute, hold/resume, transfer, end call); PSTN calls; Visual Voicemail; 911 support) - Calendar and Presence (Calendar Access and Meeting Details; Presence Integration; Exchange Calendar Integration; Contact Picture Integration; Corporate Directory Access) - Meetings (One-click Join for Meetings; Join Skype for Business meetings; Meeting Call controls [Mute/unmute, hold/resume, hang up, add/remove participant]; Meeting Details. See also https://docs.microsoft.com/en-us/MicrosoftTeams/phones-for-teams.)
Configuration / Management	Microsoft Teams & Skype for Business Admin Center (Provisioning and Logging)
Debugging Tools	Log upload to Microsoft server (certification for 3rd party Skype for Business clients)

Feature	Details
Localization Support	Multi-lingual support; the language pack list is not yet final and is subject to modification.
C450HD Hardware	- Five-inch color capacitive touch screen, 1280 x 720 resolution, with an intuitive user interface. - Wired connectivity: - Two RJ-45 [Gigabit Ethernet (GbE)] (10/100/1000BaseT Ethernet) ports for WAN and LAN - RJ-9 port (jack) for headset - RJ-9 port (jack) for handset 2 x USB ports for headset support - RJ-11 interface - Mounting: - Wall and desktop mounting options - One angle for desktop mount, another angle for wall mount - Power: - DC jack adapter 12V - Power supply AC 100 ~ 240V - PoE Class 3: IEEE802.3af (optional) - Keys: - VOICE MAIL message hotkey (including LED) 4-way navigation button with OK key - MENU - REDIAL - HOLD - MUTE (including LED) - TRANSFER - VOLUME control key - HEADSET (including LED) - SPEAKER (including LED) - BACK (the 'x' key) - CONTACTS (not yet supported in Teams)

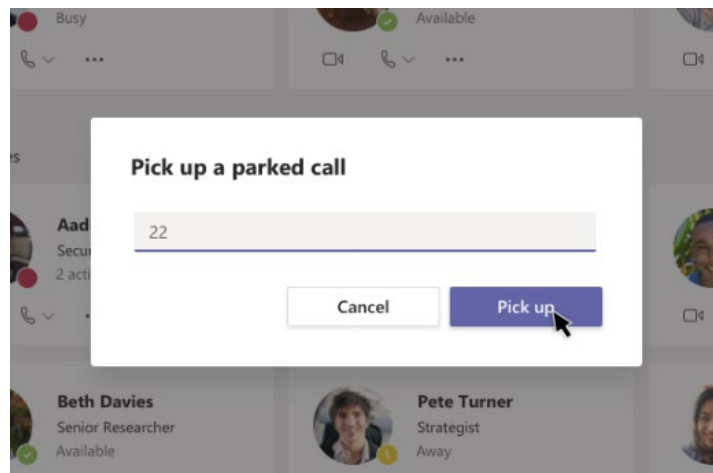
2 Version 0.281



Note: Version 0.281 includes Microsoft Teams Version 1.0.94.2019031201.

2.1 What's New in 0.281

- **Upgrade to Microsoft Teams** version *MicrosoftTeams-2019031201.apk* and **Company Portal** *com.microsoft.windowsintune.companyportal_20190204.apk*. For more information about the resolved limitations, see Section 2.3.1.
- New Microsoft Teams capability allowing a user to **park a call**, i.e., put a call on hold, park it, receive from the Teams application a unique code, communicate the code to another user who can then pick up the call on their device.
 - ◆ The user on the other device touches a new **Call park**  icon displayed in their device's main Calls screen; the following screen opens:



- ◆ The user on the other device enters the code communicated to them and then touches the 'Pick up' button to pick up the call.
- A **Lock now** option has been added to the phone. Long-pressing the **x** button on the phone for three seconds displays it. To enable it, the phone must first be configured with the option to be locked, via the Settings menu > Security.
- The **phone can be accessed via SSH** (Secure Shell daemon). Although SSH access is opened by default, network administrators must know their user name and password (Default: 'admin' and '1234'). The new SSH support gives network administrators more debugging capabilities.
- Remote Logging (Syslog) is now supported in addition to the Device Diagnostics Logs that are collected via the Microsoft Admin Portal. Remote logging gives the same log level as the Device Diagnostics Logs with some additional information that may be relevant to *device* issues (not *Teams application* issues). The main difference between Syslog and the Device Diagnostics Logs is that the Device Diagnostics Logs are saved to the device's sdcard via the Microsoft Admin Portal and collected after the event, while Remote Logging (Syslog) collects logs in real time.
- The phone's Settings Language Wizard now displays the languages that users can select as the phone's user interface language, **in the names of the languages**, for example, **Español** is displayed to indicate the option to select Spanish as the phone's user interface language.
- The phone's **default sleep timeout is now by default set to 10 minutes**.
- The **Android Debug Bridge (ADB) command-line tool can be enabled** on the phone from the Admin Debug page. ADB is by default disabled.
- The following items in the Settings menu are newly modified:

- Settings > More - options such as VPN, etc. were removed until they become available
- Settings > Security - the **Power** button instantly locks
- Settings > Languages and Input methods - the **Point Speed** option was removed
- Settings > Sound - the **Do not disturb** option was removed
- Localization: The Device Settings menu fully supports the following languages:
 - Hebrew
 - German
 - Dutch
 - Spanish
 - Italian
 - German
 - French Canadian

2.2 Known Limitations in Version 0.281

2.2.1 Teams Application Limitations

Here are the Teams application limitations known to exist in Version 0.281:

Table 2-1: Known Teams Application Limitations in Version 0.281

Incident	Description
74557	Meeting participant phones' Meetings screen: The response of the meeting organizer is sometimes displayed as 'No response'; at other times, it's displayed as the organizer's Meetings screen instead of the participant's Meetings screen (AudioCodes issue IPPAN-413).
74556	If a participant accepts an invitation to a meeting, the screen showing that they accepted the meeting is inconsistent with the screen displayed on the participant's phone (AudioCodes issue IPPAN-412).
74392	After pressing the hard speaker key on the phone to initiate a call and then pressing the hard x key or touching the ← softkey to terminate the action, the phone does not close the speaker.
73378	The voicemail counter is not updated with new voice messages (AudioCodes issue IPPAN-370).
73318	[Voicemail] The user sometimes cannot play and pause voice messages (AudioCodes issue IPPAN-315).

2.2.2 Device Limitations

Here are the device limitations known to exist in Version 0.281:

Table 2-2: Known Device Limitations in Version 0.281

Incident	Description
IPPAN-430	On rare occasions, after performing Restore to Default, the phone displays abnormal characters and the screen undergoes rotation.

2.3 Resolved Limitations

2.3.1 Teams Application Limitations

Here are the Teams application limitations that have been resolved in Version 0.281:

Table 2-3: Resolved Teams Application Limitations in Version 0.281

Incident	Description
76437	The Teams application stops after attempting to report an issue from the 'Settings' menu. A newer Teams application available in Microsoft Admin Portal resolves the issue.
74598	Canceled meetings are displayed in the 'Meetings' tab of the meeting organizer's phone (AudioCodes issue IPPAN-414).
74508	The virtual keyboard does not launch automatically after touching the icon to make a call.
74448	The phone displays abnormal characters in the screen after calls end (AudioCodes issue IPPAN-383).
73366	The phone displays a message such as 'The device is currently not enrolled in Microsoft Intune' while the phone has been logged (AudioCodes issue IPPAN-339).
73363	After a call ends, the phone sticks for more than five minutes on the screen that is displayed (AudioCodes issue IPPAN-300).
-	Home tabs (Calls / Meetings / Voicemail) on rare occasions do not load after the phone is restarted; only the thin lines between the keys are visible. Workaround: Restart the phone (again). If the workaround does not succeed, perform Restore to defaults .
-	The Teams application may sporadically crash. In most cases, the phone is automatically recovered from this state.
-	The phone on rare occasions displays the message 'Admin agent stopped'. The phone is automatically recovered from this state.
481509	The Teams application crashes if the user selects 'Emergency call' in the phone's locked screen.
461304	No notification is displayed in the phone's screen to admit the user in the lobby.
475217	After ending a call, the Teams application may crash if the device's Settings screen is displayed.
474138	The Teams application crashes after selecting 'Learn more' in the Sign-in screen.
455960	The Teams application takes a long time to connect and shows the call roster when accepting a group call.
454145	Performance issues need to be fixed and general improvements need to be made.
455965	The user's name is cut off and partially displayed when a group call comes in.
455989	The soft keypad does not disappear from the phone's screen after pressing the Call Park icon and then canceling

2.3.2 Device Limitations

Here are the limitations that have been resolved in Version 0.281:

Table 2-4: Resolved Limitations in Version 0.281

Incident	Description
IPPAN-533	Users cannot configure the phone's lock timeout to be less than the screensaver timeout; if they do, the phone is locked and the screensaver doesn't function correctly.
IPPAN-442	The user is not automatically signed out after more than five incorrect PIN attempts.
IPPAN-321	The reset configuration does not function flawlessly.
IPPAN-629	The phone rejects incoming calls when voicemail is active.
IPPAN-633	The audio channel should not be USB headset when the speaker LED is lit.
IPPAN-687	The Microsoft Intune app is not given Runtime permission. This may cause sign in issues.
IPPAN-616	The phone immediately self-locks if an unlock is performed for a third time.

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3 Previous Releases

3.1 Version 0.225



Note: Version 0.256 includes Microsoft Teams Version 1.0.94.2018121201.

3.1.1 What's New in 0.225

This is the first version release of the C450HD IP phone for Microsoft Teams.

3.1.2 Known Limitations in Version 0.225

3.1.2.1 Teams Application Limitations

Here are the Teams application limitations known to exist in Version 0.225:

Table 3-1: Known Teams Application Limitations in Version 0.225

Incident	Description
76437	The Teams application stops after attempting to report an issue from the 'Settings' menu. A newer Teams application available in Microsoft Admin Portal resolves the issue.
74598	Canceled meetings are displayed in the 'Meetings' tab of the meeting organizer's phone (AudioCodes issue IPPAN-414).
74557	Meeting participant phones' Meetings screen: The response of the meeting organizer is sometimes displayed as 'No response'; at other times, it's displayed as the organizer's Meetings screen instead of the participant's Meetings screen (AudioCodes issue IPPAN-413).
74556	If a participant accepts an invitation to a meeting, the screen showing that they accepted the meeting is inconsistent with the screen displayed on the participant's phone (AudioCodes issue IPPAN-412).
74508	The virtual keyboard does not launch automatically after touching the icon to make a call.
74448	The phone displays abnormal characters in the screen after calls end (AudioCodes issue IPPAN-383).
74392	After pressing the hard speaker key on the phone to initiate a call and then pressing the hard x key or touching the ← softkey to terminate the action, the phone does not close the speaker.
73378	The voicemail counter is not updated with new voice messages (AudioCodes issue IPPAN-370).
73366	The phone displays a message such as 'The device is currently not enrolled in Microsoft Intune' while the phone has been logged (AudioCodes issue IPPAN-339).
73363	After a call ends, the phone sticks for more than five minutes on the screen that is displayed (AudioCodes issue IPPAN-300).
73318	[Voicemail] The user sometimes cannot play and pause voice messages (AudioCodes issue IPPAN-315).

* This issue is planned to be fixed in the next version release.

3.1.2.2 Device Limitations

Here are the device limitations known to exist in Version 0.225:

Table 3-2: Known Device Limitations in Version 0.225

Incident	Description
IPPAN-430	On rare occasions, after performing Restore to Default, the phone displays abnormal characters and the screen undergoes rotation.
IPPAN-533	Users cannot configure the phone's lock timeout to be less than the screensaver timeout; if they do, the phone is locked and the screensaver doesn't function correctly.

4 Device Functions

The C450HD phone is delivered with its functions set to factory default settings. Customers can customize these function settings to suit enterprise requirements. The Settings screen, accessed from the hard MENU key on the phone or optionally via the item **Device Settings** in the Calls screen's ≡ menu, allows customers to perform customization.

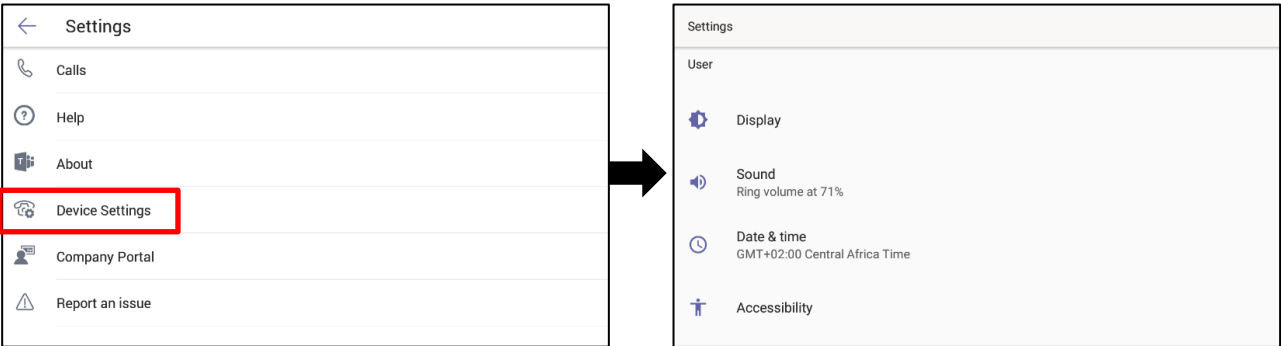
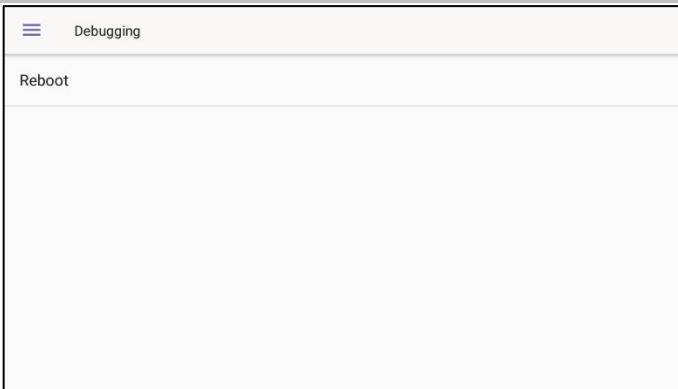
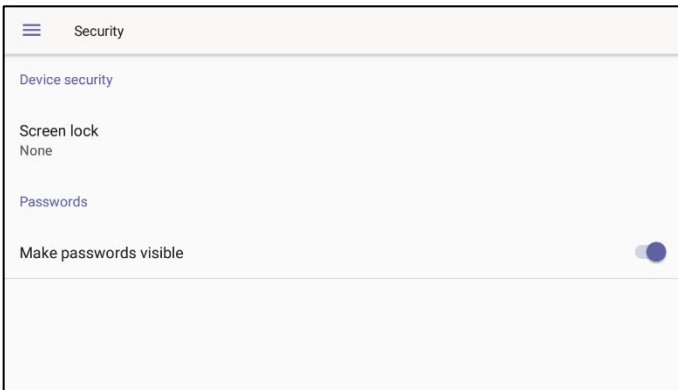
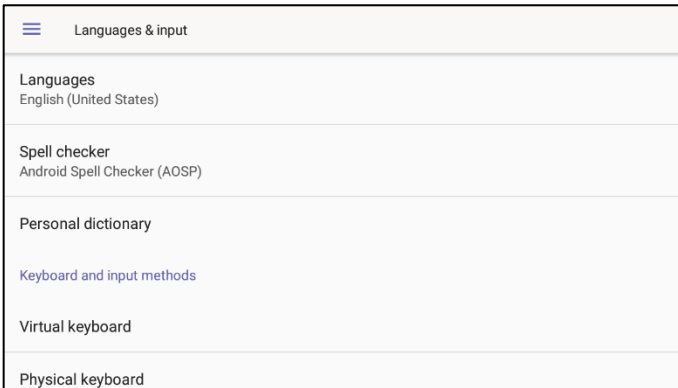


Table 4-1: Device Function Settings Descriptions

Setting	Description
Login to the Device as Regular User	
Display	Opens the 'Display' screen [Brightness level]. ≡ Display Brightness level Sleep After 1 minute of inactivity Screen saver Clock Font size Default The phone's screen supports different brightness levels. Customers can choose the level that best suits requirements. - Sleep ≡ Display Brightness level Sleep After 1 minute of inactivity Screen saver Clock Font size Default Sleep ☒ 1 minute ☐ 2 minutes ☐ 5 minutes ☐ 10 minutes ☐ 30 minutes CANCEL - Screen saver

	Font size
Sound	Allows you to customize phone volume to create a friendlier user experience. Ring volume at n%
Date & time	Date and time are automatically retrieved from the deployed Network Time Protocol (NTP) server.

	 • Use 24-hour format [Allows you to select the Time format]
Accessibility	Allows making the screen reader friendlier. 
Power Saving	Allows users to contribute to power saving in the enterprise.  • Enable power saving • Office hours start time [The device consumes minimal energy before the user arrives at the office] • Office hours end time [The device consumes minimal energy after the user leaves the office]
Debugging	Log in as Administrator (MENU key on the phone > Admin) for more debugging settings to be available. This 'Debugging' setting enables you to reboot the device.

		
Security	Helps secure the enterprise telephony network against breaches.  Screen lock [The phone automatically locks after a configured period to secure it against unwanted use. If left untouched for 10 minutes (default), it automatically locks and is inaccessible to anyone who doesn't know its lock code.] • Make passwords available • Storage type • Trusted credentials • User credentials • Install from SD card • Clear credentials	
Touch screen	Allows users to disable the phone's touch screen.	
Languages & input	Allows users to customize inputting to suit personal requirements.	
About [Android 7.1.2]	Enables users to determine device information.	



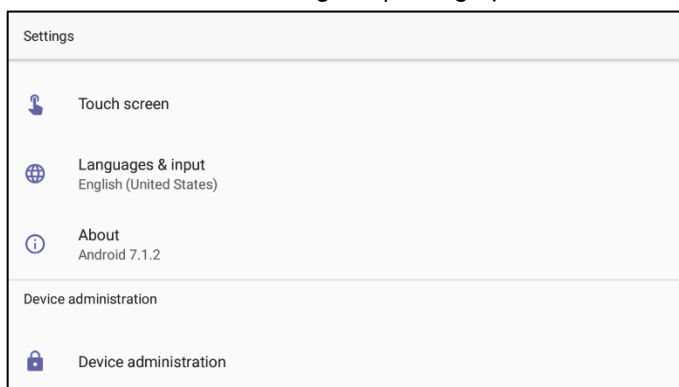
To determine the device's IP address, select the 'Status' option.

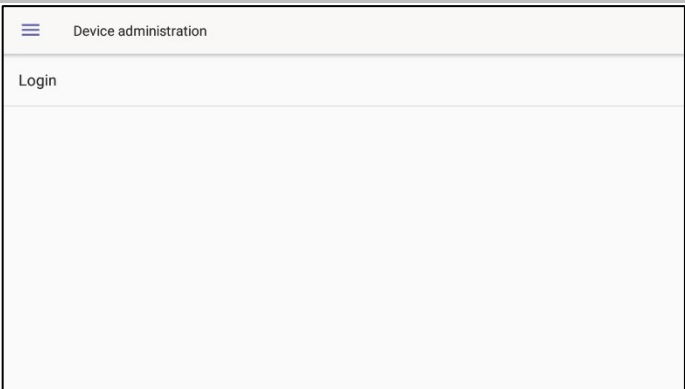
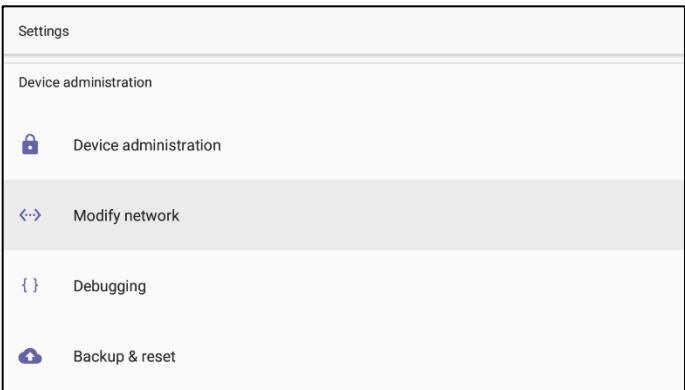
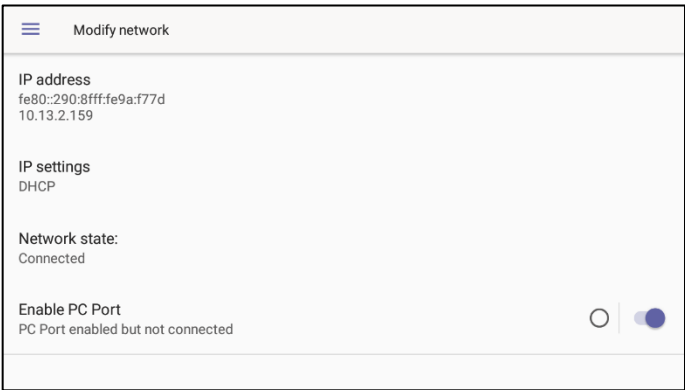


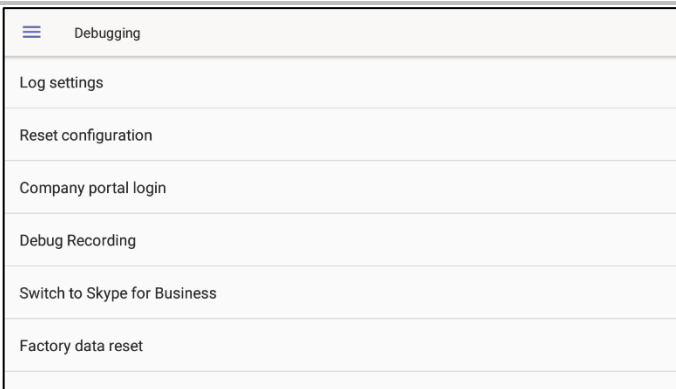
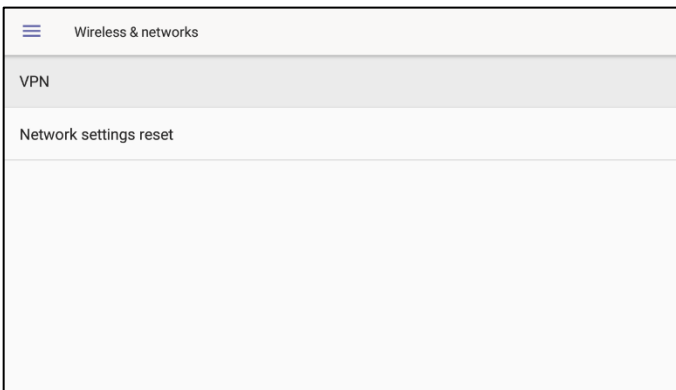
Login to the Device as Admin

Device administration

Allows the user to log in as Administrator. It is password protected. Default password: 1234. After logging in as an Administrator, the user can log out | change password.



		
Modify network	Enables the Admin user to determine network information and to modify network settings.	  • IP Address [Read Only] • IP Settings [DHCP or Static IP] • Network state [Read Only] • Enable PC port
Debugging	Allows the Admin user to perform debugging for troubleshooting purposes. Available after logging in as Admin.	

	 • Log settings • Remote Logging • Reset configuration • Restart Teams App • Company portal login • Debug Recording (for Media/DSP debugging) • Switch to Skype for Business • Factory data reset (the equivalent of restore to defaults; including logout and device reboot). • ADB (Disable/Enable)
Backup & Reset	Enables the Admin user to perform a factory data reset. 
.... More	Enables the Admin user to access the Wireless & Networks screen.  The 'Network settings reset' options enables resetting all network settings including Wi-Fi and Bluetooth.

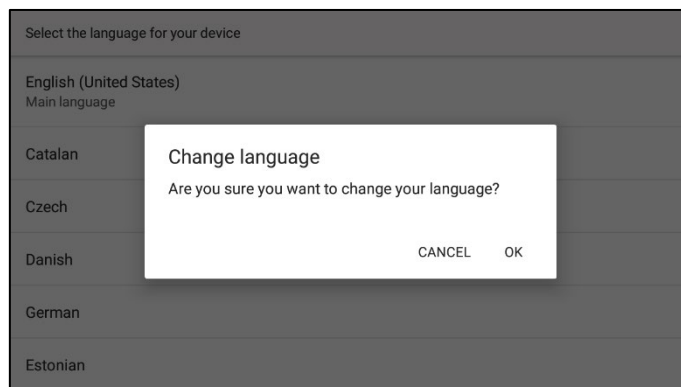
4.1 Restoring Phones to Default Settings

Users can restore their phones to default factory settings at any time. The feature can be used if a user forgets their password, for example. Two kinds of restore are available:

- Hard restore
- Soft restore

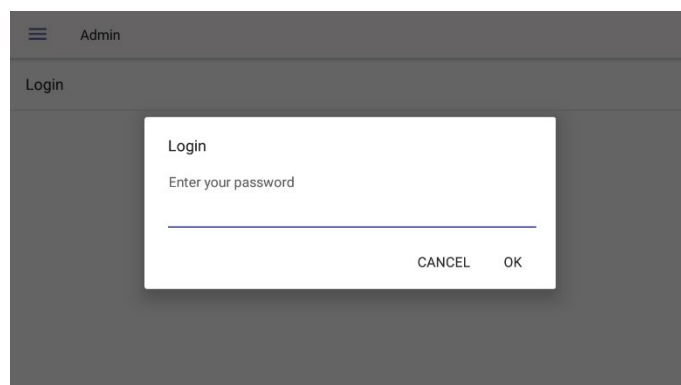
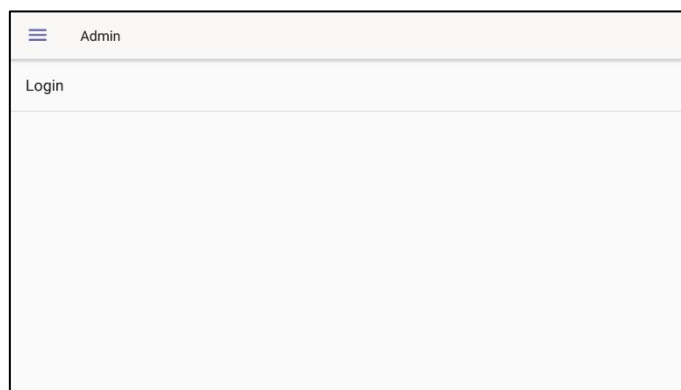
4.1.1 Hard Restore

Users can perform a hard restore by long-pressing the HOLD key on the phone (more than 15 seconds). After the restore, the Languages screen is displayed and then after selecting the language of their choice, the sign-in screen is displayed.



4.1.2 Soft Restore

Users can perform a soft restore in the 'Debug' screen after logging in as Administrator. The user then presses the x key on the phone and in the device's Settings screen, selects the **Debug** option and then the **Factory data reset** option.



 Debug
Log settings
Reset configuration
Company portal login
Debug Recording
Switch to Skype for Business
Factory data reset

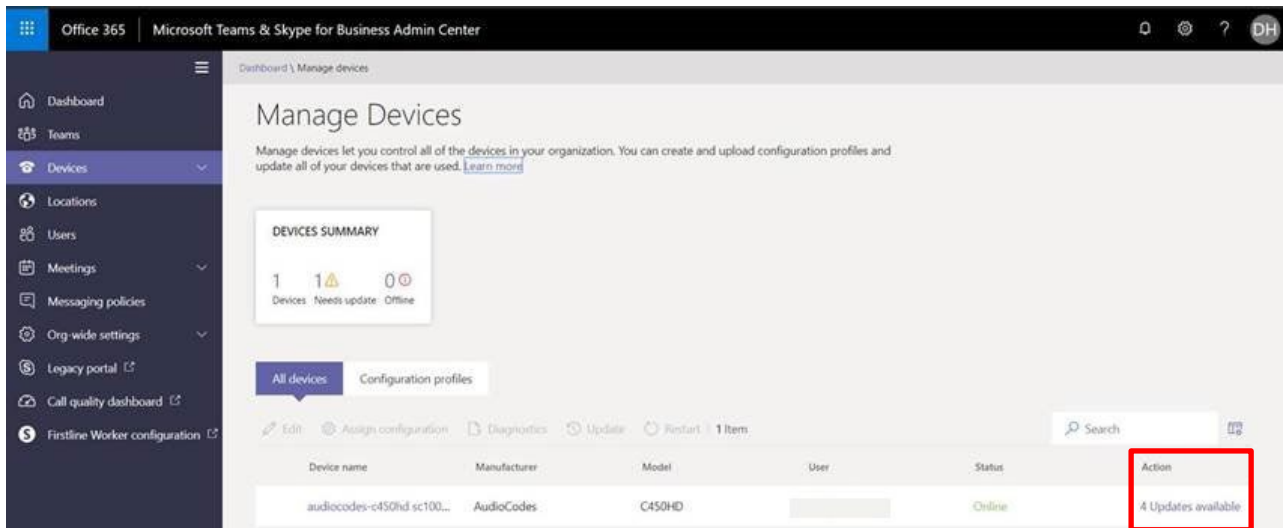
4.2 Upgrade of Phones whose Firmware is Version 0.124 - 0.150



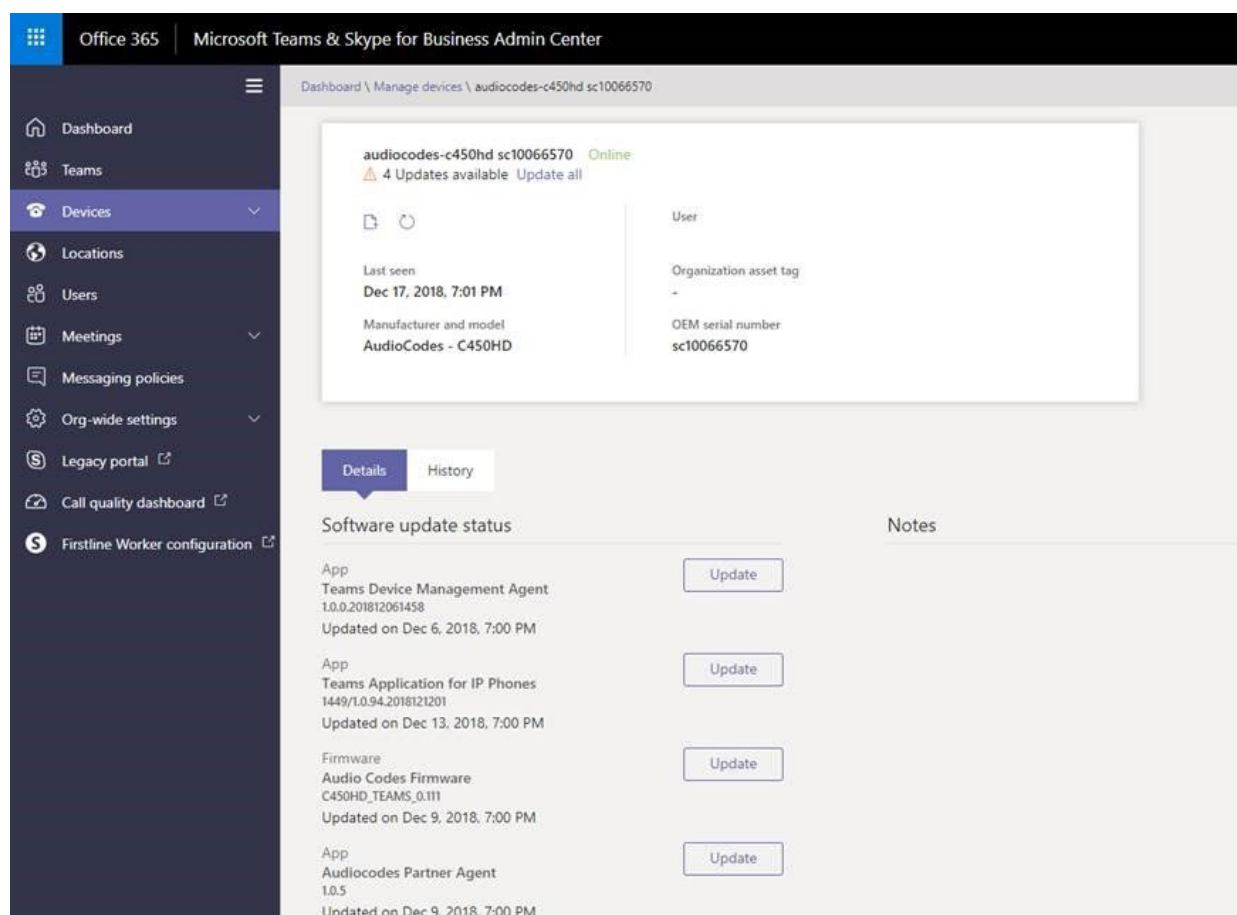
Note: If your phone's firmware is *between* Version 0.124 and 0.150 inclusive, follow the instructions below. If it's *earlier* than Version 0.124, contact AudioCodes Support for assistance.

Network administrators can upgrade the C450HD phone whose firmware is Version 0.124 - Version 0.150 using the Microsoft Teams & Skype for Business Admin Center. Here's how:

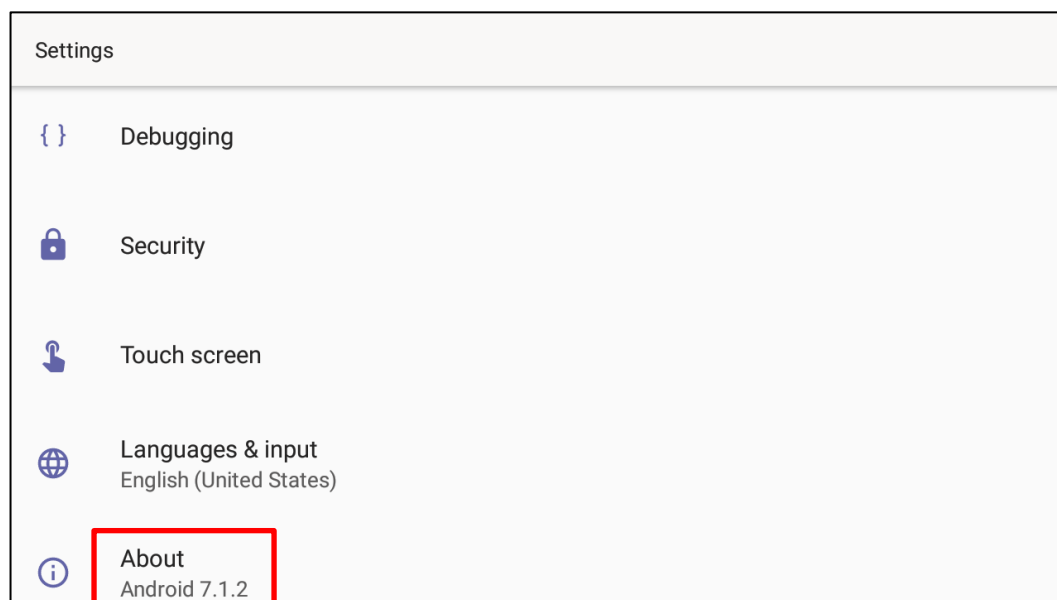
1. In the Microsoft Teams & Skype for Business Admin Center, open the Manage Devices screen.



2. Under the **All devices** tab, double-click the updates link under the **Action** column.



3. Select **Update** adjacent to AudioCodes Firmware and follow the instructions.
4. Verify the successful completion of the upgrade procedure from the C450HD phone's About screen (press the hard MENU key and scroll down to **About**).



5. Touch the **About** option.

6. In the About screen, scroll down to **Version info**

Tablet status
Legal information
Model C450HD
Android version 7.1.2
Android security patch level July 1, 2017
Version info



Note: After upgrading firmware for phones whose firmware is between Version 0.124 and Version 0.150 inclusive, the upgrade may be displayed as failed in the Microsoft Teams & Skype for Business Admin Center. Touch **Version info** and confirm that the phone's **Firmware version** is upgraded to Version 0.158 and later. All future upgrades will be indicated as 'Completed'.

Version info
Firmware version C450HD_TEAMS_0.281
Firmware code 281
Bootloader 1.0.43
Microsoft Teams version Version name: 1449/1.0.94.2019031201 Version code: 2019436010
Company Portal version

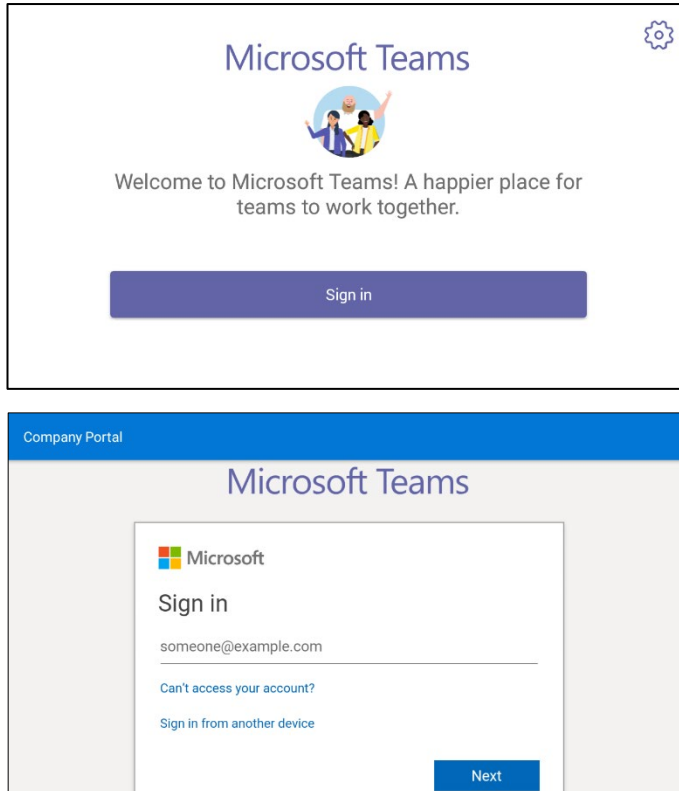
5 Teams Application Functions

Some of the Teams Application functions supported by the C450HD phone in this version are:

■ Sign-in

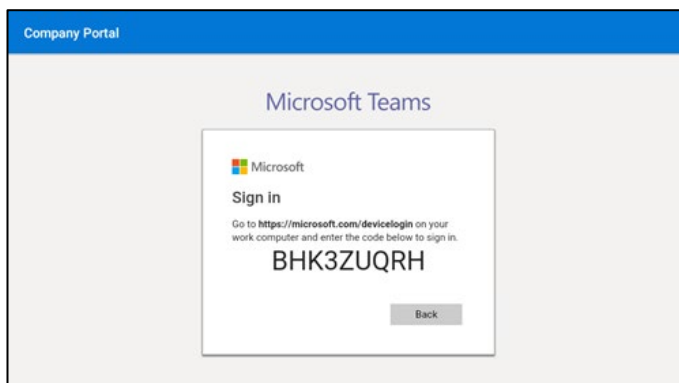
Sign-in must be performed before using the phone for security purposes. Sign-in can be performed with user credentials or using the user's PC/Smartphone. 'Modern Authentication' is also supported.

• Signing-in with credentials



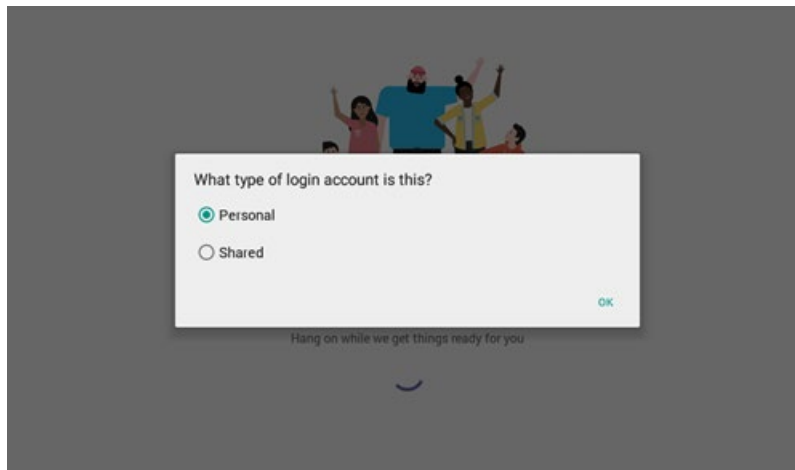
Note that after touching the sign in field, the keyboard in the sign-in screen that opens eclipses the sign-in field; users must scroll up to view the text displayed.

• Signing-in via PC/smartphone



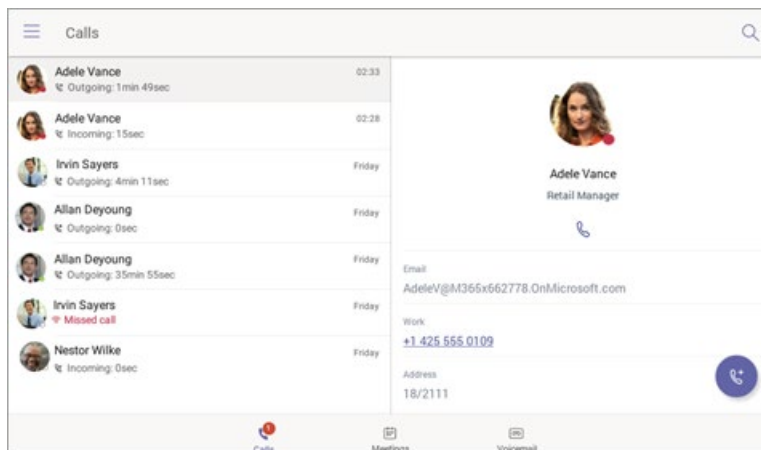
■ Personal/shared mode

After successful sign-in, the user can choose whether the device will be used for personal use or in a shared conference room.

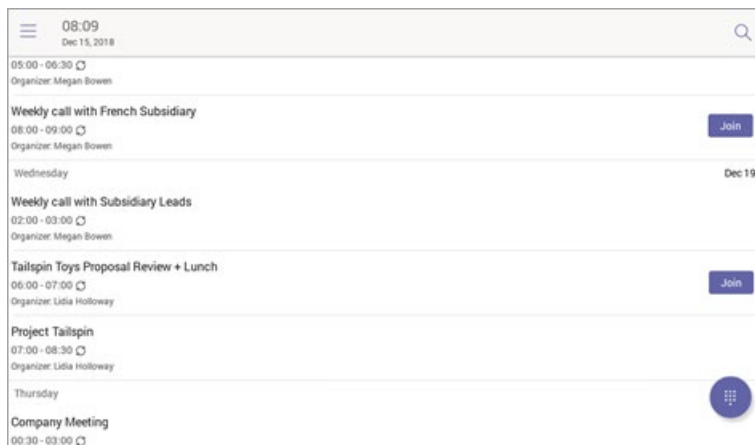


The user's experience is optimized based on their selection.

- **Personal mode**



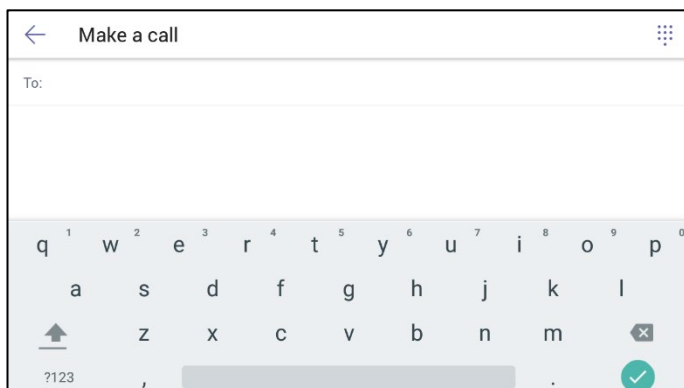
- **Shared mode**



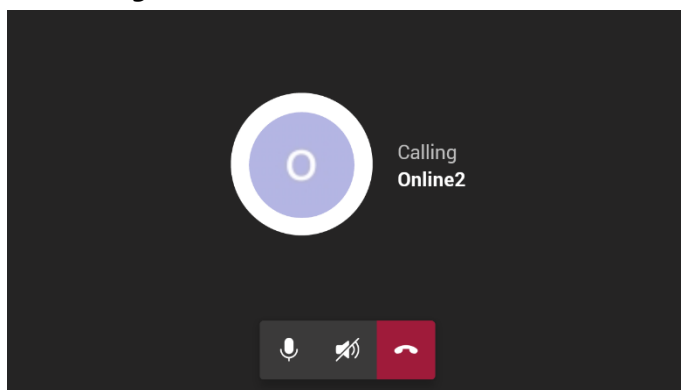
■ Calling

The user can lift the handset or press the speaker button to launch the dial pad on the calling screen. Alternatively, the user can use the hardware buttons (if available) to dial out a number.

• On-screen dial pad

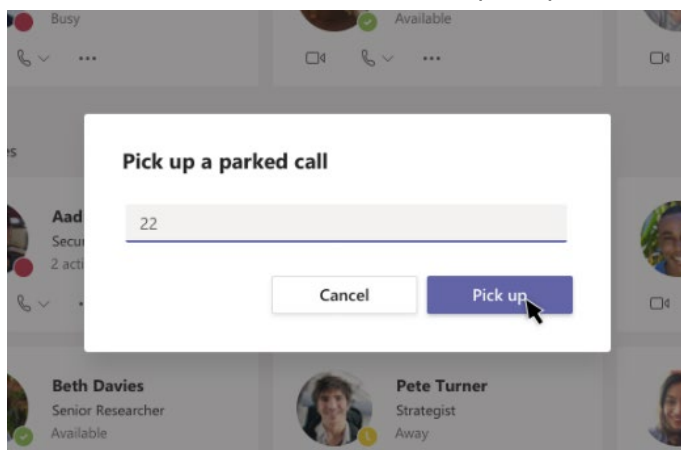


• Calling screen



■ Call Park

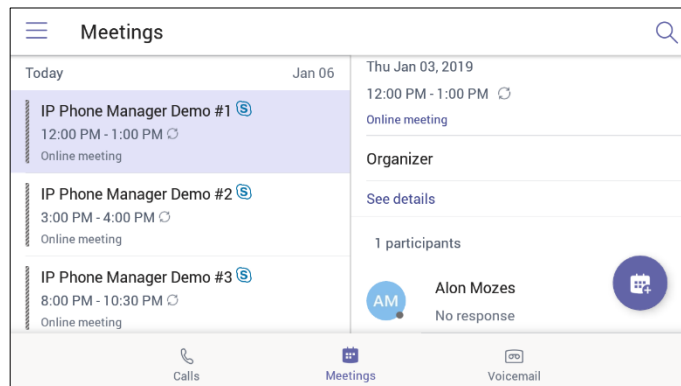
A user can put a call on hold, park it, receive from the Teams application a unique code, communicate the code to another user who can touch a new **Call park**  icon displayed in their phone's main Calls screen and then enter the code to pick up the call.



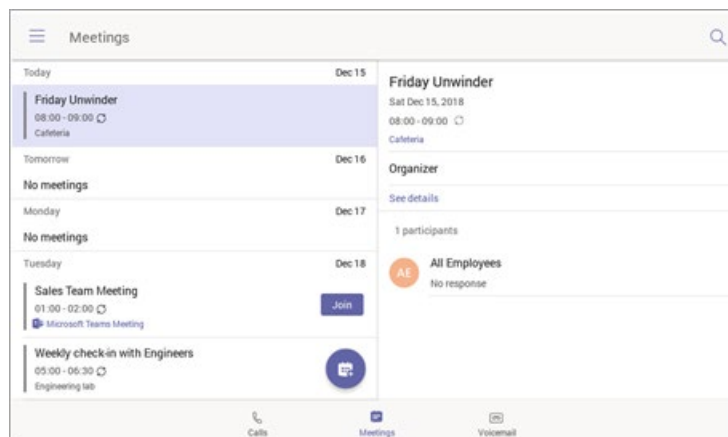
■ Meeting

The user can navigate to the Meetings tab to view their meetings and use the **Join** button to join their Teams meetings.

• Meetings

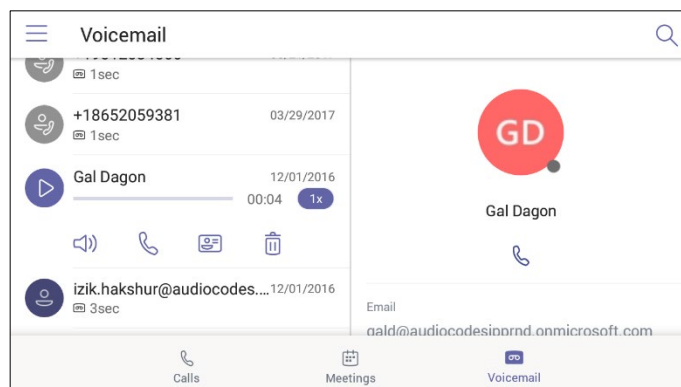


• Calendar view



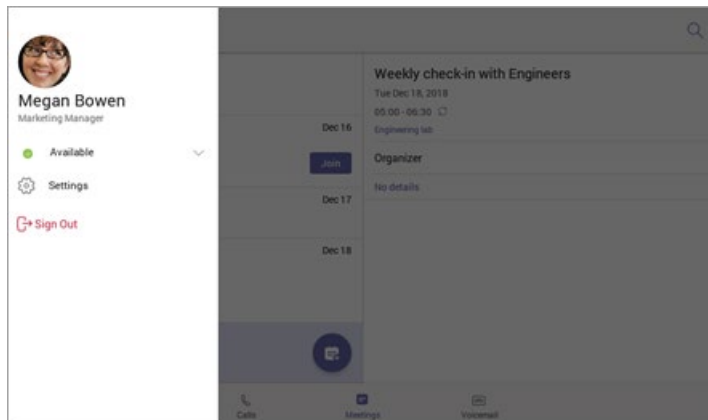
■ Voicemail

The user can access their voicemail when they navigate to the **Voicemail** tab.



■ User sign-out

The user can sign out of the phone.



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