Teams Direct Routing - Common Area Phones

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Overview

> **NOTE**
>
> Microsoft has renamed the **Common Area Phone** subscription license to **Microsoft Teams Shared Devices**.

This article covers the process to convert a Teams enabled phone into a **Microsoft Teams Shared Device**. A Teams enabled shared phone is typically placed in an area like a lobby, kitchen, break room, or conference room, and can also be used for hoteling (hot desking).

Teams enabled shared phones are associated with a user account that's assigned a **Microsoft Teams Shared Devices** subscription license. The **Microsoft Teams Shared Devices** license includes a license for Microsoft Teams and a **Teams Phone Standard** add-on license. By itself, the license does not include the ability to dial out to the PSTN. For that you need a direct routing provider like Evolve IP, or you need to purchase a Microsoft Calling Plan to use Microsoft's gateway to the PSTN.

> **IMPORTANT**
>
> Teams enabled shared devices cannot be used as a dial-in bridge. If you have a shared phone in a conference room, the phone can only be used to dial into the meeting organizer's dial in bridge.
>
> **Note:** Teams Meeting Room devices should not be used as a Teams enabled shared device in a conference room, and they should not be assigned a **Microsoft Teams Shared Devices** subscription license.

New Features for Teams Shared Devices

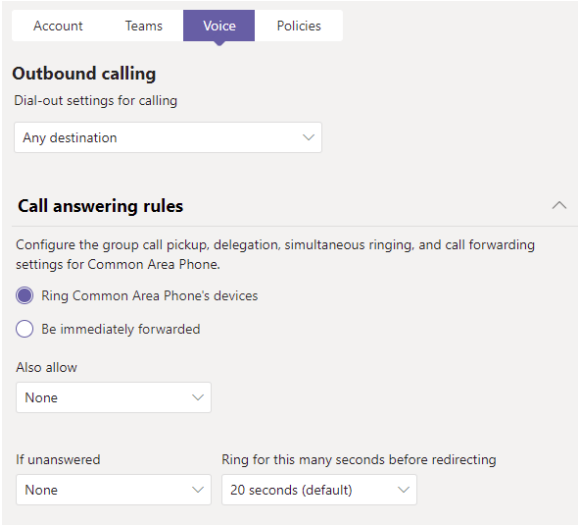
As of July 2022, Microsoft has enhanced the **Microsoft Teams Shared Devices** offering to serve a wider variety of scenarios for customers without increasing the price. These enhancements apply to all customers with **Microsoft Teams Shared Devices** subscription licenses, and includes security, endpoint management, and cloud-based voicemail features made available via the following service plans added to the **Microsoft Teams Shared Devices** license:

- Microsoft Entra ID P1
- Microsoft Intune
- Exchange Online Plan 2

In addition, the following calling features are available for Teams Phone devices enabled with a **Microsoft Teams Shared Devices** license and the latest Teams app update (minimum version - 1449/1.0.94.2022061702):

- Call park and retrieve
- Cloud-based voicemail through Exchange Online Plan 2
- Call queues
- Auto attendants
- Group call pick-up
- Forwarding rules

To use the calling features on the supported Teams Phone models you need to enable the Advanced Calling settings (see below screenshot) in Teams admin center or on the Teams Phone device, and sign-in through the **Microsoft Teams Shared Devices** user account.



To enroll Teams phone Android-based devices into the Intune service, check the requirements at **Configure Intune to enroll Teams Android-based devices**.

If you have auto-enrollment set up in the Microsoft Endpoint Manager admin center, and you do not want to auto-enroll your Teams device, you need to unassign the Intune license when this change rolls out or set-up a grouping structure that omits these devices from auto-enrollment.

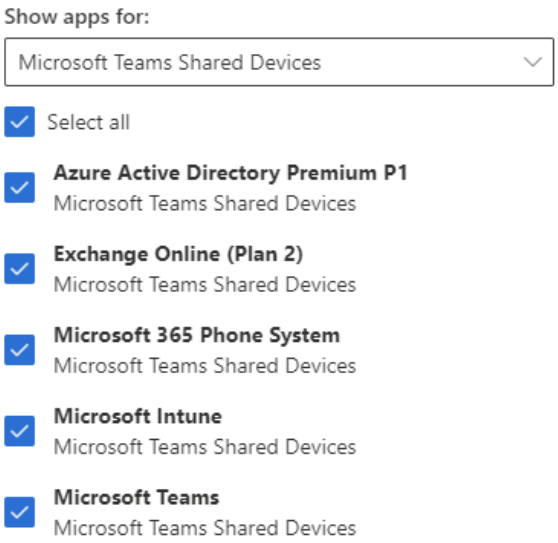
Planning for Teams Shared Devices

Some important things to know and understand when deploying Teams enabled shared devices.

User Accounts & Licensing

- The **Microsoft Teams Shared Devices** license can be purchased directly from Microsoft in the M365 Admin Center, from a Microsoft volume license reseller, or from a Microsoft Cloud Solution Provider (CSP) partner like Evolve IP.
- The **Microsoft Teams Shared Devices** license includes:
  - Microsoft Teams
  - Microsoft 365 Phone System
  - Microsoft Intune
  - Microsoft Entra ID P1
  - Exchange Online (Plan 2)
- Teams enabled shared devices are associated with a user account, which is assigned the **Microsoft Teams Shared Devices** license. It is not a device license.
  - The user account should not be disabled or blocked from signing in.
  - The user account should have a complex password, and should not be assigned any admin roles.
  - With the included **Microsoft Entra ID P1** license you can apply conditional access policies to restrict the phone's sign in conditions.

> **NOTE**
>
> The **Exchange Online (Plan 2)** license is only to support cloud voicemail. Email is not supported. If you don't want your Teams enabled shared device to have voicemail, you can deselect the Exchange Online (Plan 2) license, or disable the user account's voicemail using the following Teams PowerShell command:
>
> ```
> Set-CsOnlineVoicemailUserSettings -Identity user1@contoso.com -
> VoicemailEnabled $false
> ```



Teams Shared Devices Limitations

- Teams enabled shared devices cannot be used as a dial in bridge. When you use a Teams enabled shared device in a conference room, the phone is used to dial into the meeting organizer's dial in bridge.
- If you do not configure the user account with Teams direct routing or assign the user account a Microsoft Calling Plan, you cannot dial out to the PSTN, which means it cannot be used to dial emergency services (911, 999, 112, etc.).
- To properly configure a Teams enabled shared device, you need to use **PowerShell.** You can set up a shared device in the **Teams admin Center (TAC)**, but the TAC doesn't allow you to configure some important settings.

Teams Shared Devices User Experience

Some notes about the end-user experience with Teams enabled shared devices:

- If the phone's home screen is disabled, which is recommended, the main screen of the phone only displays the dial pad.
- Except for voicemail (when enabled), there are no other options such as calendar or call history.
- If your configuration allows it, a user can use the phone to search the directory for other Teams users.
- After signing into the phone it will stay signed in even after a reboot or power cycle. The user account associated with the phone should not be blocked from signing in.
- To sign the phone out you will need the phone's admin password, which is entered in the Admin Only menu of the phone. Depending on the OS of the phone, the admin password can be set using a configuration policy in the Teams admin center.

Teams IP Phone Policy

Teams IP Phone policies manage features related to Teams enabled phones including Teams enabled shared devices.

There is a **Global** Teams IP Phone Policy, which applies to all Teams enabled phones including regular end-user Teams phones. Therefore, instead of changing the global policy to configure a shared phone, you should create a new policy and assign it to the phone's user account. Unfortunately, none of this can be done in the Teams admin center – it has to be done using PowerShell.

> **IMPORTANT**
>
> You must be assigned the **Teams Administrator** role to manage Teams IP Phone policies. The **Teams Device Administrator** and **Teams Communications Administrator** roles are not enough.

Teams IP Phone Policy Settings

Below are the Teams IP Phone Policy settings, and here are the PowerShell commands used to configure custom IP Phone Policies:

- Get-CsTeamsIpPhonePolicy
- New-CsTeamsIpPhonePolicy
- Remove-CsTeamsIpPhonePolicy
- Grant-CsTeamsIpPhonePolicy

Setting Name	Values	Description
Allow Better Together	• Enabled (Default) • Disabled	Better Together phones can lock and unlock in an integrated fashion when connected to a Windows PC running a 64-bit Teams desktop client.
Allow Home Screen	• Enabled • Enable User Override (Default) • Disabled	Determines whether the Home Screen feature of the Teams IP Phones is enabled.
Allow Hot Desking	• True (Default) • False	Determines whether hot desking mode is enabled.
Description	• Text	Free form text that can be used by administrators as desired.
Hot Desking Idle Timeout In Minutes	• Number (Default is 120)	Determines the idle timeout value in minutes for the signed in user account. When the timeout is reached, the account is logged out.
Search On Common Area Phone Mode	• Enabled (Default) • Disabled	Determines whether a user can search the Global Address List in Common Area Phone Mode.
Sign In Mode	• User Sign In (Default) • Common Area Phone Sign In • Meeting Sign In	Determines the sign in mode and UI experience for the device when signing into Teams. Possible Values: • **User Sign In** - Enables the individual user's Teams experience on the phone. • **Common Area Phone Sign In** - Enables a Common Area Phone experience on the phone. • **Meeting Sign In** - Enables the meeting area experience on the phone.

Scenarios & Settings for Teams IP Phone Policies

This section covers the scenarios and the Teams IP Phone policy configuration settings for each scenario:

- Shared devices for general purpose areas (reception, kitchens, break rooms, etc.)
- Shared devices for meeting areas (small meeting rooms and meetup areas)

- Shared devices for hot desking (shared desk or cube spaces). **Note:** This scenario does not require a Teams Shared Devices license.

Teams Shared Devices - General Purpose

Setting Name	Value	Notes
Allow Better Together	Disabled	Should be disabled when configuring a policy for general common area phones.
Allow Home Screen	Disabled	This should be disabled. Only the dial pad will be shown on the phones.
Allow Hot Desking	False	This should be False when configuring general area common area phones.
Description	Text	A description of the policy for your common area phones.
Hot Desking Idle Timeout In Minutes	120	Hot desking is disabled, so this setting is ignored.
Search On Common Area Phone Mode	Disabled	This should be enabled if you want to allow end-users to search your directory.
Sign In Mode	CommonAreaPhoneSignIn	Required to put the phone in the common area phone mode.

Teams Shared Devices - Meeting Rooms

Setting Name	Value	Notes
Allow Better Together	Disabled	Should be disabled when configuring a policy for common area phones in meeting areas.
Allow Home Screen	Disabled	This should be disabled. Only the dial pad will be shown on the phones.
Allow Hot Desking	False	This should be False when configuring common area phones for meeting areas.
Description	Text	A description of the policy for your common area phones.
Hot Desking Idle Timeout In Minutes	120	Hot desking is disabled, so this setting is ignored.
Search On Common Area Phone Mode	Enabled	This should be disabled if you don't want end-users to search your directory.
Sign In Mode	Meeting SignIn	Required to put the phone in the common area phone mode for meeting areas.

Teams Shared Devices - Hot Desking

NOTE

This configuration scenario is for normal Teams users, and does not require a Teams Shared Devices license. Additionally, the Teams IP Phone "Global" policy has hot desking enabled for all users by default. You would only need to create custom policies for hot desking if you need different timeout settings.

Setting Name	Value	Notes
Allow Better Together	Enabled	Should be enabled when configuring a policy for hot desking, but not required.
Allow Home Screen	EnabledUserOverride	This should remain enabled, but it's not required. If disabled, only the dial pad will be shown on the phones.
Allow Hot Desking	True	This should be True when configuring phones for hot desking.

Description	Text	A description of the policy for your hot desking phones.
Hot Desking Idle Timeout In Minutes	120	Determines the idle timeout value in minutes for the signed in user account.
Search On Common Area Phone Mode	Enabled	Common area phone mode is not enabled, so this setting is ignored.
Sign In Mode	UserSignIn	Required to put the phone in the user sign in mode.

Create a New Teams IP Phone Policy

Make sure you have the latest version of the Microsoft Teams PowerShell module installed, and sign into your Microsoft Teams services. PowerShell requirements and sign in details can be found in the Teams Direct Routing Planning and Prerequisites article.

PowerShell Command Reference

- Get-CsTeamsIpPhonePolicy
- New-CsTeamsIpPhonePolicy
- Grant-CsTeamsIpPhonePolicy
- Remove-CsTeamsIpPhonePolicy

View Existing Teams IP Phone Policies

```
Get-CsTeamsIpPhonePolicy
```

Create a New Teams IP Phone Policy

```
###
### This example will create a policy for general areas and allow
directory search.
###

$PolicyProperties = @{

    Identity                    = "EvolveIP-Common-Areas"
    SignInMode                  = "CommonAreaPhoneSignIn"
    AllowBetterTogether         = "Disabled"
    AllowHomeScreen             = "Disabled"
    AllowHotDesking             = $False
    SearchOnCommonAreaPhoneMode = "Enabled"
    Description                 = "General common area phones"
}

New-CsTeamsIpPhonePolicy @PolicyProperties
```

```
###
### This example will create a policy for meeting areas and allow
directory search.
###

$PolicyProperties = @{

    Identity                    = "EvolveIP-Meeting-Areas"
    SignInMode                  = "MeetingSignIn"
    AllowBetterTogether         = "Disabled"
    AllowHomeScreen             = "Disabled"
    AllowHotDesking             = $False
    SearchOnCommonAreaPhoneMode = "Enabled"
    Description                 = "Meeting area phones"
}

New-CsTeamsIpPhonePolicy @PolicyProperties
```

```
###
### This example will create a new policy for hot desking with a 6 hr
timeout.
###

$PolicyProperties = @{

    Identity                      = "EvolveIP-HD-Sales"
    SignInMode                    = "UserSignIn"
    AllowBetterTogether           = "Enabled"
    AllowHomeScreen               = "EnabledUserOverride"
    AllowHotDesking               = $True
    HotDeskingIdleTimeoutInMinutes = 360
    SearchOnCommonAreaPhoneMode   = "Disabled"
    Description                   = "Hot desking users in sales dept."
}

New-CsTeamsIpPhonePolicy @PolicyProperties
```

Delete a Teams IP Phone Policy

```
Remove-CsTeamsIpPhonePolicy "EvolveIP-Common-Areas"
```

Assign a Teams IP Phone Policy to a User Account

```
Grant-CsTeamsIpPhonePolicy "cap-kitchen@contoso.com" -PolicyName "EvolveIP-
Common-Areas"
```

Remove a Teams IP Phone Policy from a User Account

```
Grant-CsTeamsIpPhonePolicy "cap-kitchen@contoso.com" -PolicyName $null
```

Configure for Teams Direct Routing

In this section we will configure the user account assigned the **Microsoft Teams Shared Devices** license for Teams direct routing and assign the Teams IP Phone Policy.

> **IMPORTANT**
>
> Make sure the user account has been assigned a **Microsoft Teams Shared Devices** license before running these commands.

> **TIP**
>
> If you are switching a shared device from a Microsoft calling plan to Teams direct routing, remove the phone number from the user account, and then remove the calling plan license. Make sure you keep the **Microsoft Teams Shared Devices** license assigned.

PowerShell Command Reference

- Get-CsOnlineUser
- Get-CsOnlineVoiceRoutingPolicy
- Get-CsTenantDialPlan
- Get-CsTeamsIpPhonePolicy
- Set-CsPhoneNumberAssignment
- Grant-CsTeamsUpgradePolicy
- Grant-CsOnlineVoiceRoutingPolicy
- Grant-CsTenantDialPlan

Get the name of the Evolve Voice Routing Policy, which will be entered into the below block of PowerShell code.

```
Get-CsOnlineVoiceRoutingPolicy | Where { $_.Identity -like "*Evolve*" }
```

Get the name of the Evolve Tenant Dial Plan, which will be entered in the below block of PowerShell code.

```
Get-CsTenantDialPlan | Where { $_.Identity -like "*Evolve*" }
```

Get the name of the Evolve Teams IP Phone Policy, which will be entered in the below block of PowerShell code.

```
Get-CsTeamsIpPhonePolicy | Where { $_.Identity -like "*Evolve*" }
```

Provision the shared device for Direct Routing

> **NOTE**
>
> Microsoft requires that all phone numbers be in the E.164 format. This means the following:
>
> - Include a "+" before the country code
> - No special characters or spaces between the numbers
> - Here's an example: +16105551234

IMPORTANT

In the below PowerShell code, be sure to change the relevant data on **lines 2, 5, 8, 11 & 14** to match your configuration and specific user account.

```
# Enter the name of the Evolve voice routing policy
$VrPolicyName = "EvolveIP-USEast"

# Enter the name of the Evolve tenant dial plan
$TdpPolicyName = "EvolveIP-TenantDialPlan"

# Enter the name of the Evolve Teams IP phone policy
$TipPolicyName = "EvolveIP-Common-Areas"

# Enter the CAP's user principal name
$UPN = "user@domain.com"

# Enter the CAP's telephone number (no spaces, dashes, or parentheses)
$Phone = "+16105551234"


### Begin User Provisioning ###

# This will check if the CAP's account coexistence mode is set to
TeamsOnly for Direct
# Routing. If it is not set to TeamsOnly, it will be set.

If ((Get-CsOnlineUser $UPN).TeamsUpgradeEffectiveMode -ne "TeamsOnly") {
  Grant-CsTeamsUpgradePolicy -Identity $UPN -PolicyName UpgradeToTeams
}

# The following will configure the CAP's account for direct routing and
add the account
# to the voice routing policy, the tenant dial plan, and the Teams IP
phone policy.

Set-CsPhoneNumberAssignment -Identity $UPN -PhoneNumber $Phone -
PhoneNumberType DirectRouting
Grant-CsOnlineVoiceRoutingPolicy -Identity $UPN -PolicyName $VrPolicyName
Grant-CsTenantDialPlan -Identity $UPN -PolicyName $TdpPolicyName
Grant-CsTeamsIpPhonePolicy -Identity $UPN -PolicyName $TipPolicyName

### End User Provisioning ###
```