MS-700 Managing Microsoft Teams Exam Guide

Second Edition

Configure and manage Microsoft Teams workloads and achieve Microsoft 365 certification with ease

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13

Managing Phone System for Microsoft Teams

In this chapter, we will explain the principles behind managing the phone system capabilities within Microsoft Teams. You will learn how to manage call queues and auto attendants that you configure within Microsoft Teams, as well as how to set up policies to control the behavior of features, such as call parking, calling, and caller ID within Microsoft Teams. Finally, we will show you how to access and interpret the Health Dashboard for Direct Routing, which allows you to monitor connections between your **Session Border Controllers** (**SBCs**) and the **Direct Routing interface**.

In this chapter, we're going to cover the following main topics:

- Create and manage call park, calling, and caller ID policies

- Manage user voice settings

- Create, manage, and interpret dial plans

- Identify potential issues by using the Health Dashboard for Direct Routing

- Create and manage resource accounts

- Create and manage call queues

- Create and manage auto attendants

Technical requirements

In this chapter, you will need to have access to the **Microsoft Teams admin center**, which you can find at `https://admin.teams.microsoft.com`. You will need to be either a **Global Administrator** or a **Teams Service Administrator** to have full access to the features and capabilities within the Microsoft Teams admin center.

To create resource accounts, you'll need a **Phone Standard license**. Call queues and auto attendants will also need to be assigned **Phone Standard Virtual User licenses** (these are free).

Create and manage call park, calling, and caller ID policies

In this section, we'll take a close look at call park, calling, and caller ID policies in the Microsoft Teams admin center under the **Voice** node.

With all of these policies, there are PowerShell options. Each is prefixed with `New-` (create), `Set-` (modify), or `Grant-` (assign to users/groups). Even if not all three are explicitly mentioned in the following subsections, just remember that each type has these three cmdlets.

Let's start with reviewing call park policies.

Call park policies

Call park enables users to place calls on hold and transfer them to other users. As with other Teams policies, only one call park policy can be applied to a single user.

Call park policies can be configured with the following settings:

Setting	Options
Call park	On/Off
Call pickup start of range	A numeric value between 10 and 9,999 (10 by default)
Call pickup end of range	A numeric value between 10-9,999 (99 by default)
Park timeout (seconds)	A numeric value between 120 and 1,800 (300 by default)

Table 13.1 – Call park policy configuration settings

> **Note**
>
> Call park and retrieve is only available if your tenant is in Teams Only deployment mode. You cannot implement this ability for Skype for Business IP phones.

You can modify an existing call park policy by using PowerShell. Use the `Set-CsTeamsCallParkPolicy` cmdlet with `-Identity` (policy name) and `-AllowCallPark` parameters, such as in the following example, where call parking for the Global policy is disabled:

```
Set-CsTeamsCallParkPolicy -Identity Global -AllowCallPark
$false
```

You can also create new policies using the same PowerShell parameters but with the `New-CsTeamsCallParkPolicy` cmdlet instead of the `Set` cmdlet.

Now, let's review calling policies.

Calling policies

Calling policies determine which calling features users in your organization are allowed to use. You might, for example, create a custom policy to prevent a group of users from being able to use call forwarding. As with all other Teams policies, only one calling policy can be assigned to a user. If a policy isn't explicitly applied to a user, the default global policy will apply.

To create a custom calling policy, go to the Microsoft Teams admin center at `https://admin.teams.microsoft.com` and choose **Voice** | **Calling policies** from the left-hand menu. Once there, click **Add**.

Each calling policy can be configured with the following settings:

Setting	Options
Make private calls	On/Off
Call forwarding and simultaneous ringing to people in your organization.	On/Off
Call forwarding and simultaneous ringing to external phone numbers.	On/Off
Voicemail is available for routing inbound calls.	Not enabled, Enabled, User controlled
Inbound calls can be routed to call groups.	On/Off
Delegation for inbound and outbound calls.	On/Off
Prevent toll bypass and send calls through the PSTN.	On/Off
Music on hold for PSTN callers.	Not enabled, Enabled, User can control
Busy on busy is available when in a call.	Not enabled, Enabled, or Unanswered
Web PSTN calling.	On/Off
Real-time captions in Teams calls.	On/Off
Automatically answer incoming meeting invites.	On/Off
SIP devices can be used for calls.	On/Off

Table 13.2 – Calling policy configuration setting options

Busy on busy can be a bit confusing, but simply means that if the policy is applied to you, you will provide a busy signal to callers when you're already on a call (whether actively, or one placed on hold) and you won't be distracted by a notification of another call. In the global policy, this is disabled by default, meaning users can still receive and make calls, even if they're already on a call.

When each setting for your custom policy is configured as you wish, click **Save**. You'll be redirected back to the **Calling policies** page.

As with other Teams policies, you can assign a policy to users by selecting it on its page and then choosing **Manage users** from the menu.

You can alternatively use the **Users** node to assign policies to users in bulk (select all users to whom you're applying policy changes and then choose **Edit settings**). This bulk option allows you to set not only calling policies but multiple policies in one action. *Figure 13.1* shows the pane that appears when editing multiple policy settings for users on the **Users** node of the Microsoft Teams admin center:
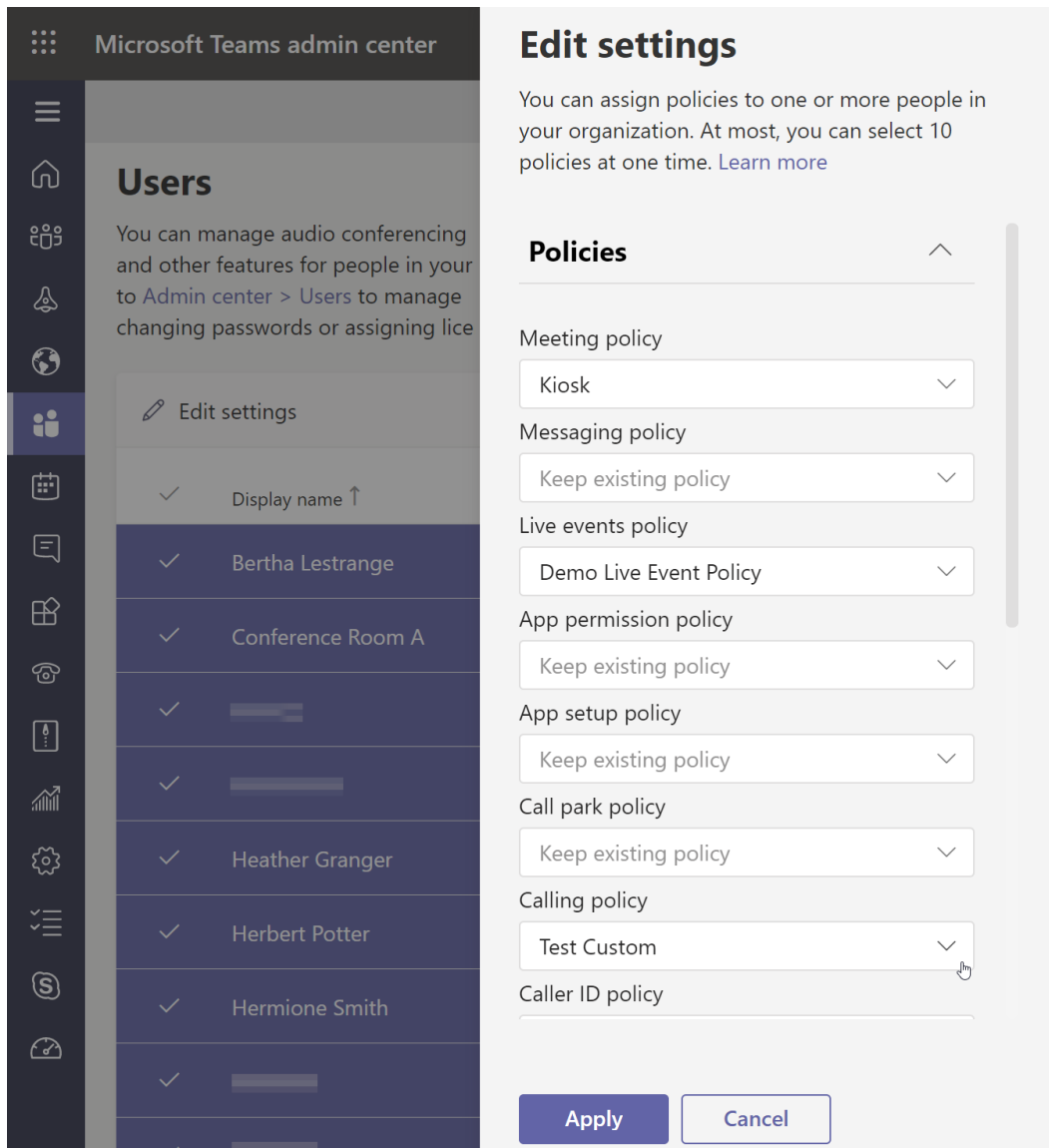

Figure 13.1 – The Edit settings pane of the Users node for a bulk policy modification

You can also update calling policy settings via PowerShell using the `Set-CsTeamsCallingPolicy` cmdlet. An example might be the following, in which we're disallowing call forwarding on the Global policy:

```
Set-CsTeamsCallingPolicy -Identity Global
-AllowCallForwardingToPhone $false
```

Replace `Set` with `New` in order to create a policy rather than modify an existing policy.

Finally, let's look at caller ID policies.

Caller ID policies

Caller ID policies either modify or block the caller ID experience for users in your organization. By default, recipients of your users' calls see the user's assigned phone number displayed when they're calling.

You can change the number that displays; this might be helpful when callers from help desk environments don't want personal lines shown but would rather people call a shared queue for the group.

In some scenarios, it may also be helpful to replace all users' phone numbers with an auto attendant for the whole organization if a user makes an external outgoing call to the **public switched telephone network** (**PSTN**). This would make sure returned calls go through a dedicated process rather than calling users directly and having individual lines.

Caller ID policies can be configured with the following settings:

Setting	Options
Block incoming caller ID	On/Off.
Override the caller ID policy	On/Off.
Replace the caller ID with	User's number, Service number, Anonymous.
Replace the caller ID with this service number (if Service number is chosen in the previous setting)	Select from available service numbers in your organization.

Table 13.3 – Caller ID policy configuration setting options

If you choose to enable **Override the caller ID policy**, users can choose for themselves whether their number or **Anonymous** shows when they make outbound calls. *Figure 13.2* shows a Caller ID policy being created that will set the caller ID for its users as **Anonymous** when they make outbound calls. It also allows the individual users to override that setting and choose to show their number instead.

Caller ID policies \ Add

Anonymous Caller ID with Override Option

This Caller ID policy allows users to override the default of showing their Caller ID to external callers as anonymous.

Block incoming caller ID	⬤ Off
Override the caller ID policy	⬤ On
Replace the caller ID with	Anonymous ⌄
Replace the caller ID with this service number	Choose a service number ⌄

Save   Cancel

Figure 13.2 – A caller ID policy showing caller ID as Anonymous but allowing override

Caller ID is also known as Calling Line Identity/ID. This is what's used in the PowerShell cmdlets for Caller ID policies. The cmdlets are `New-CsCallingLineIdentity` (create new), `Set-CsCallingLineIdentity` (modify existing), and `Grant-CsCallingLineIdentity` (assign to users). An example of usage might be the following, where a new Caller ID policy is being created that sets the Caller ID to display as **Anonymous** for outgoing calls, but allows users to override that setting:

```
New-CsCallingLineIdentity  -Identity AnonymousOutgoing
-Description "Anonymous displays for outgoing calls."
-CallingIDSubstitute Anonymous -EnableUserOverride $true
```

Now, let's explore available voice settings.

Manage user voice settings

In this section, we'll review the possibilities for changing Teams users' voice experiences.

One of the most essential settings for voice solutions is voicemail. For cloud-only solutions, voicemail is automatically set up for users once they're assigned a Phone System user license. Voicemail also includes transcription (voice-to-text) by default.

Users may wish to perform several administrative actions for their voicemail and phone line, which you won't need to do for them as an administrator, but it might be helpful to know about them. These actions are done from the Teams client, and each of these can be found under **Settings** on the *ellipsis* (three dots) in the upper-right corner by your profile picture or initials. Individuals are able to modify the following:

- Add and remove delegates (**Settings | General | Delegation**).
- Change audio device settings (**Settings | Devices**).
- Make a test call (**Settings | Devices | Make a test call**).
- Call answering rules (**Settings | Calls**).
- Voicemail settings (**Settings | Calls | Voicemail**).

Figure 13.3 shows the Calls **Settings** dialog that users can configure for themselves. This specific figure shows the settings for call forwarding, simultaneous, or chain ringing, as well as voicemail configuration and ringtones.
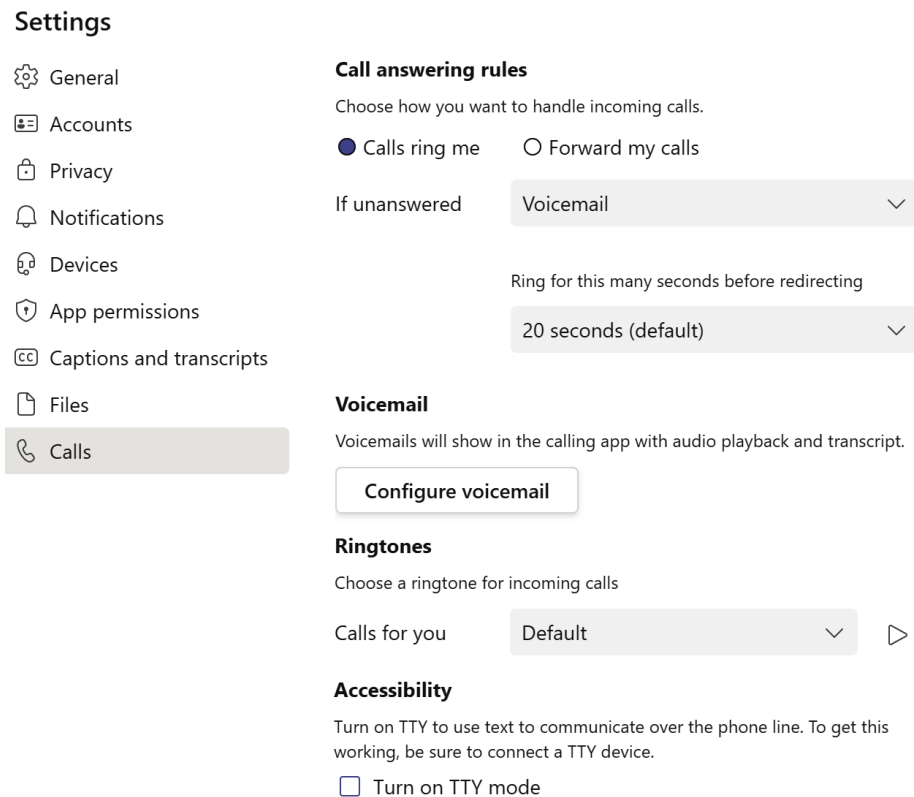

Figure 13.3 – Calls settings for an individual Teams user

> **Note**
>
> In order to see delegation settings (**Settings | General | Delegation**), you'll need an Enterprise or Business Voice license, and you must be in **TeamsOnly** deployment mode. Any delegates will be able to see when, and with whom, you're on a call and can make and receive calls on your behalf.

There are several opportunities in the Microsoft Teams admin center's **Voice** node where administrators can create policies that enhance and change the Teams user experience through the policies and settings we've explored. These user-specific settings empower employees to further customize their own usage and experience.

In addition to caller ID, calling, and call park policies, you can configure dial plans to enhance the user experience and save users time dialing. Next, we'll learn to create, manage, and interpret dial plans.

Create, manage, and interpret dial plans

Dial plans are sets of rules that can convert partial dial pad entries into a standard (*E.164*) phone number format. *E.164* is the international public telecommunication numbering plan, or international standard, that is used globally and ensures every number worldwide is unique.

We want to use a dial plan to make our users' dialing experiences as simple as possible while still utilizing full E.164 format numbers. For example, when users dial 700 from within your organization, it could direct them to the help desk. Another common example is letting users dial within the organization just by using an extension (the last three or four digits of assigned numbers). You could pair this with a dial plan setting that requires a 9 to be dialed before users can dial an external number so it doesn't attempt to interpret a full, external number as an extension.

Dial plans can be configured with the following settings:

Setting	Options
External dialing prefix	1-4 digits
Optimized device dialing	On/Off
Normalization rules	A section where translation details are specified, such as completing the internal number if only an extension is entered

Table 13.4 – Dial plan configuration setting options

The plan configuration page also includes a section where you can test the dial plan by entering a number and seeing how it performs based on the rules and details configured in the plan. Before you can use the test feature, you have to save and return to editing the plan.

You can have multiple normalization rules per dial plan. For each normalization rule within the plan, you can configure it as basic or advanced.

Basic normalization rules are best for those unfamiliar with regular expressions, and include the following configuration options (where *X* represents an integer):

Setting	Options
Name	Text.
Description	Text.
Basic/Advanced	(Set to Basic in this table).
If all selected conditions match	The number dialed begins with X and/or the length of the number being dialed is exactly or at least X.
Then do this	Remove X digits from the start and/or add X to the beginning (such as "+1816").
Test this rule (optional)	Enter a dial pad entry to see whether the rule fires and how it translates the entry if so.

Table 13.5 – Basic normalization rule configuration options

Advanced normalization rules use regular expressions, and include the following configuration options:

Setting	Options
Name	Text.
Description	Text.
Basic/Advanced	(Set to Advanced in this table).
Select from a template (optional)	Prefills the If condition setting for four-digit, five-digit, or seven-digit outbound dialing scenarios.
If condition	A regular expression defining the condition under which the normalization rule will fire.
Then do this	How to translate the number when the If condition is met. Also a regular expression.
Test this rule (optional)	Enter a dial pad entry to see whether the rule fires and how it translates the entry if so.

Table 13.6 – Advanced normalization configuration setting options

In *Figure 13.4*, you can see an advanced normalization rule being created that will allow four-digit dialing, automatically translating the extension to a full number:
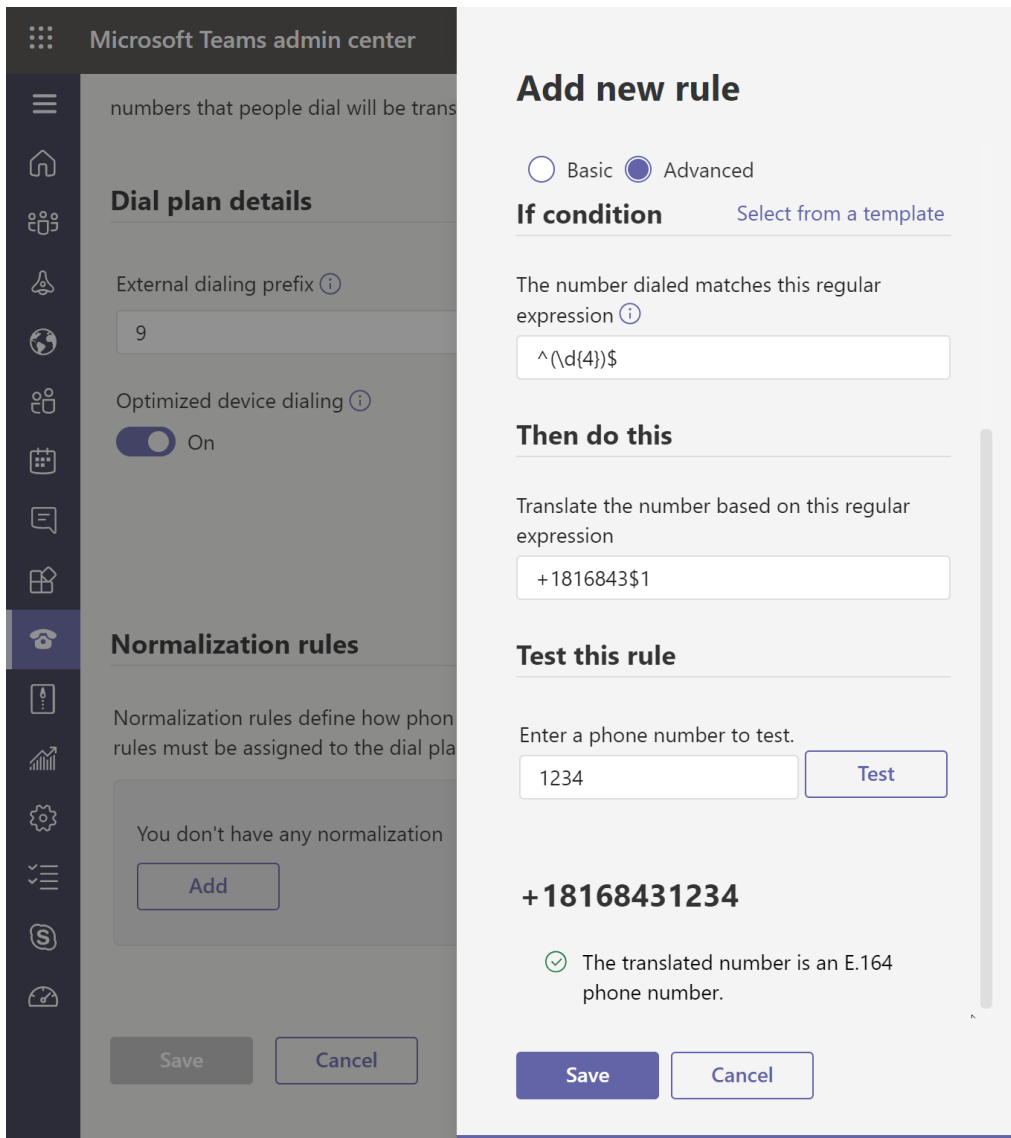

Figure 13.4 – A normalization rule in progress that translates a four-digit dial pad entry into a full E.164 number

As with the other Teams policies, you can create dial plans using PowerShell (though there are certainly more parameters to deal with given the inclusion of normalization rules). The cmdlet for creating a new dial plan is `New-CsTenantDialPlan`, and an example of doing this might be the following:

```
New-CsTenantDialPlan -Identity ExternalDialing -Description
"Dial Plan for External Calling"  -ExternalAccessPrefix 9
-OptimizeDeviceDialing $true -SimpleName "Dial-Plan-for-
External-Calls"
```

> **Note**
> Optimized device dialing must be enabled if configuring an external dialing prefix.

Now, let's review the Health Dashboard for Direct Routing.

Identify potential issues by using the Health Dashboard for Direct Routing

The **Health Dashboard for Direct Routing** measures two main items in your Teams environment when you've deployed an on-premises solution connecting SBCs to your Direct Routing interface. These two measures are as follows:

- The health of connected SBCs
- Information about connected SBCs

For example, this dashboard would be helpful in analyzing dropped call information. This is also the place where, in *Chapter 12*, *Managing Phone Numbers*, we set up SBCs, PSTN usage records, and voice routes to be used with voice routing policies.

The Health Dashboard can be found via **Microsoft Teams admin center** (`https://admin.teams.microsoft.com`) | **Voice** | **Direct Routing**. It consists of a Health Dashboard summary, and then areas for SBCs, voice routes, and PSTN usage records.

The Health Dashboard summary shows the following:

- Total SBCs
- Voice routes
- SBCs with issues

The SBCs section of the dashboard lists all of your SBCs, and shows network effectiveness, average call duration, Transport Layer Security (TLS) connectivity status, SIP options status, concurrent calls capacity, and whether the SBC is enabled. SBCs can be viewed in list format, or as a map using the *Map View* icon.

The **Voice routes** tab lists out the priority, voice route name, description, regex dialed number pattern, related PSTN usage, and SBCs enrolled for each. These can be searched, edited, and re-prioritized from this tab.

PSTN usage records can be added and deleted from **Manage PSTN usage records** found in the upper-right corner of the dashboard.

Now, it's time to look more closely at creating resource accounts that we can use for voice apps.

Create and manage resource accounts

Resource accounts are Azure AD objects (specifically disabled user objects) that can have phone numbers assigned to them. These could be conference rooms, call queues, auto attendants, and equipment.

When working with Teams voice, you will use resource accounts specifically for your call queues and auto attendants. Having a resource account designated for these allows us to assign phone numbers to the call queues and auto attendants. We'll cover the setup of call queues and auto attendants in detail later in this chapter.

First, we need to look at the process for creating a new resource account.

Create and edit a resource account

To create a resource account, perform the following steps:

1. Go to the Microsoft Teams admin center at `https://admin.teams.microsoft.com`.

2. Select **Voice | Resource accounts** from the left-hand menu.

3. Click **Add**.

4. Provide the following information for the new resource account:

    I.   **Display name** (how it'll show up in Azure AD and lookups).

    II. **Username** (for example, `AutoHelpDesk@contoso.com`).

      III.   **Resource account type** (how it will be used). This can be **Auto attendant** or **Call queue**.

5.   Click **Save**.

Later, you can edit a resource account by repeating *Step 1* and *Step 2* and then selecting the display name of the account you wish to edit. You can only edit some settings if the account is currently unassigned to a voice application (call queue or auto attendant). You'll need to unassign the resource account, make changes, and then reassign it.

Tip

Once created, you cannot edit a resource account's username in the Microsoft Teams admin center. You can only modify **Display name** and **Resource account type** if the account is unassigned, and you can also change the **Phone number type** and assignment.

You can also create resource accounts using PowerShell.

Create a resource account using PowerShell

The SkypeForBusiness PowerShell module's cmdlet for creating a new resource account is `New-CsOnlineApplicationInstance`. This is paired with one of two application IDs that indicate whether **Resource account type** is **Auto attendant** or **Call queue**. They are as follows:

- Auto attendant: `ce933385-9390-45d1-9512-c8d228074e07`

- Call queue: `11cd3e2e-fccb-42ad-ad00-878b93575e07`

Here's an example of using this cmdlet with an application ID to provision a new resource account:

```
New-CsOnlineApplicationInstance -UserPrincipalName
AutoHelpDesk@contoso.com -ApplicationId "ce933385-9390-45d1-
9512-c8d228074e07" -DisplayName "Auto Attendant - Help Desk"
```

Now, let's assign a phone number to our new resource account.

Assigning a phone number to a resource account

Once your account is created, you can assign a phone number to it that will be used to reach the call queue or auto attendant associated with the account. To assign or unassign a phone number, follow these steps:

1. Go to the Microsoft Teams admin center at `https://admin.teams.microsoft.com`.

2. Select **Voice** | **Resource accounts** from the left-hand menu.

3. Select an existing resource account.

4. Click **Assign/unassign**.

5. Select options for each of the settings:

    I.   Choose a **Phone number type** option (**None**, **Online**, **Toll-free**, or **On-premises**).

    II. For **Assigned phone number**, choose an available phone number to associate with the account. If none are available, you may need to get additional numbers of the correct type (auto attendant or call queue). See *Chapter 12*, *Managing Phone Numbers*, for assistance with this.

    III. If you already have your auto attendant set up, you can assign it under **Select an auto attendant** here as well.

6. Click **Save**.

You'll want to make sure a license is assigned to the resource account (use the free Phone System - Virtual user license) after it's created before it can be used.

To unassign numbers, simply repeat *Step 1* to *Step 4* and remove the assigned number from the resource account's settings.

Assigning/unassigning Direct Routing numbers to resource accounts

You will need to use PowerShell if assigning a Direct Routing (on-premises) number to the resource account (see *Chapter 12*, *Managing Phone Numbers*, for more information on Direct Routing). You could accomplish this assignment by using the following cmdlet and parameters as an example:

```
Set-CsOnlineApplicationInstance -Identity AutoHelpDesk@contoso.
com -OnpremPhoneNumber +11234567890
```

To unassign a direct routing number, you'd use something similar to the following:

```
Set-CsOnlineApplicationInstance -Identity  AutoHelpDesk@
contoso.com -OnpremPhoneNumber ""
```

Next, we'll cover deleting a resource account.

Deleting a resource account

Before a resource account can be deleted, you must first unassign any number assigned to it. Once unassociated with a service number, you can delete the resource account from the **Users** node of the Microsoft Teams admin center as you would with a user.

In the next sections, we'll be covering call queues and auto attendants that can be associated with resource accounts.

Create and manage call queues

Before we create a call queue or auto attendant, some steps need to be performed in advance to make the process simpler. Let's look at those steps first.

Prepare for call queues and auto attendants

Before you can use call queues and auto attendants, you must first follow these steps:

1. You must have purchased or transferred the phone numbers to be used with each.

2. You'll then need a resource account created in Azure AD for each of the lines (both queues and auto attendants). A resource account can be assigned more than one service number if needed.

3. Each resource account for call queues and auto attendants must be assigned a Phone System – Virtual User license, and each user who will receive calls from a call queue must have a calling plan.

4. Next, you'll specify the holidays (**Microsoft Teams admin center** | **Voice** | **Holidays**) your auto attendants should be aware of for off-hour call handling.

5. You may choose to also configure call parking and retrieval if you wish to implement that in your solution.

6. Create the groups (security, distribution list, Teams membership, or M365 group) to be used in call handling, such as a team for Service Desk members who will answer Call Queue calls (optional, as you can directly assign individual members if you wish).

7. If you're allowing dial-by-extension, you'll need to make sure each user to be reached by extension has that property populated in their Azure AD profile.

> **Tip**
> Use Microsoft Teams team membership for call queue agent population so that those agents also have a space for collaboration and shared storage to help standardize their responses, work, and internal collaboration.

It's important that you purchase or transfer service numbers and then create resource accounts to which you'll assign those numbers *prior* to creating auto attendants and call queues. During the configuration of auto attendants and call queues, you'll have the chance to attach the resource account (with the assigned number already) to the new voice app, saving you a significant amount of time backpedaling.

You've now completed the steps necessary to begin creating and using auto attendants and call queues. Let's first look at creating call queues.

Call queues

Call queues are like virtual lobbies that allow you to configure the following:

- A greeting
- Hold music
- Call routing (first in, first out)
- Handling options for overflow and timeout

You might combine an auto attendant with a call queue so that users *Press 1* for the auto attendant to speak with the Service Desk, and are then placed in the Service Desk's call queue until a representative/agent can take their call.
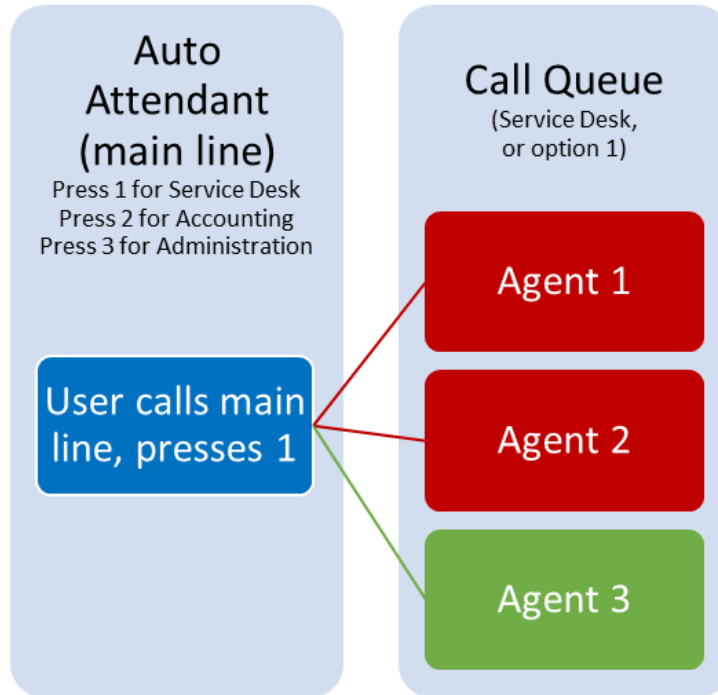

Figure 13.5 – An example of auto attendant and call queue pairing

Call queues can have users wait for the first available person from a group of agents, send them to voicemail, or redirect users to other queues and auto attendants.

Call queues can be created in multiple languages, similar to auto attendants, but cannot handle off-hours like auto attendants. You'd want to use the auto attendant as the greeting and handler, and only then redirect to call queues during appropriate hours.

An excellent feature of call queues is the ability to integrate with Teams presence indicators. This means that if a representative of the Service Desk is unavailable, they won't receive call queue calls until they're available again.

Creating a call queue

It's important that you've completed the prerequisites mentioned earlier in this chapter in the *Create and manage resource accounts* section. You'll save time by already having ordered the service number and assigned it to a resource account for your call queue (which you can create before creating this call queue).

You'll also save time by already having created the group or Team whose membership will make up the agent/associate pool of those who will be responsible for answering calls waiting in this queue.

When you're fully prepared, follow these steps to create the call queue:

1. Go to the Teams admin center at `https://admin.teams.microsoft.com`.

2. Select **Voice** | **Call queues** from the left-hand menu.

3. Click **Add**.

4. Name your call queue.

5. Select or create the resource account(s) to associate with this call queue. You can also create a resource account from the dropdown if you haven't in advance.

6. Under **Assign calling ID**, optionally select a resource account that should be used as the outgoing caller ID (for example, a representative calls a client and their number shows as a resource account instead of their direct line).

7. Set the language for this call queue to be used for voicemail transcription, system prompts, and greetings.

8. Set **Greeting** to either **No greeting** or **Play an audio file** (which you'll upload here).

9. Set **Music on hold** to either the default music or upload your own audio file.

10. Add specific users (individually) and/or groups to the **Call answering** section or choose a channel within a team whose membership should be used for agents. These are the agents who will receive calls from this queue. If you choose to use individuals and groups rather than a team channel, individuals are prioritized higher than groups. The specific individuals and groups are ordered within each category based on the routing method you'll specify in *Step 12*.

11. Choose whether this call queue should be in **Conference mode**. When enabled, agents will get calls more quickly and directly. If **Off**, calls are redirected traditionally via a transfer.

12. Choose from the **Routing method** options to prioritize who receives calls from those listed in *Step 10*. You can choose **Attendant routing** (all available agents ring, first to pick up stops ringing for the rest), **Serial routing** (will work down the list one by one until someone answers, prioritizing individuals before groups), **Round robin** (evenly distribute call volume to agents), or **Longest idle** (whoever has been set to **Available** the longest).

13. Choose whether to enable **Presence-based routing** (Teams presence determines the availability to take a call), as well as **Agents can opt out of taking calls** (agents can reject a call).

14. Choose the number of seconds for **Agent alert time** to determine how long the phone rings before moving on to its next course of action, such as trying the next agent as per the **Routing method** settings.

15. Next, **Call overflow handling** is where you'll set a maximum number of users (up to 200) that can be in a queue before your call overflow handling settings are enforced. For overflow behavior, once your maximum is reached, you can choose either **Disconnect** or **Redirect this call to**.

16. Choose the **Call time out handling** settings for maximum caller wait time (up to 45 minutes) and whether to disconnect or redirect the caller at that specified time.

17. Click **Save**.

When choosing overflow and time out handling in *Step 15* and *Step16*, you can choose to redirect callers to another user, voicemail, voice app (another auto attendant or call queue), or an external phone number.

> **Note**
>
> Agents who use Skype for Business instead of Teams will not receive calls from the queue if Conference mode, Longest idle, or Presence-based routing are enabled.
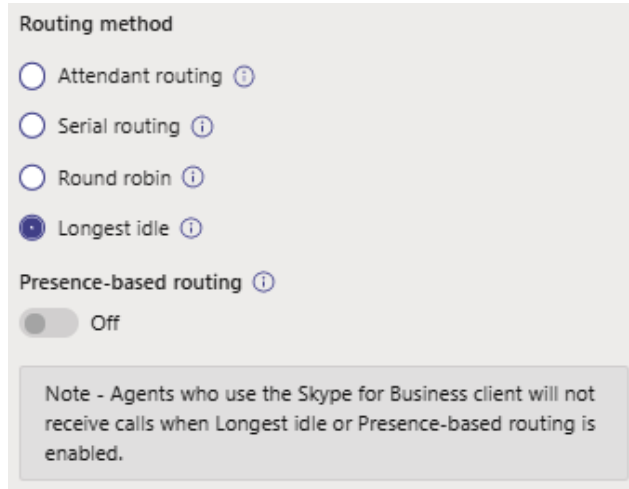
Figure 13.6 – Routing method settings for a call queue with the conditional disclaimer about agents who may be using Skype for Business that won't receive calls

Now that we've prepared for auto attendants and call queues, and configured call queues, let's change our focus to auto attendants.

Create and manage auto attendants

Auto attendants are the bot-like operators for calls that provide numeric button options for users to get to the right department or person. You can either record and upload the audio used by the auto attendant or use text-to-speech technology (system-generated prompts) for the greeting and menu.

Each auto attendant has its own language and time zone, making it easy for it to assist in business needs during local business hours in the most appropriate language. Being available during business hours is helpful, as is the counterpart of configuring it to respond during off-hours, weekends, and holidays in a way that's most appropriate for the context.

Each auto attendant can optionally be configured with a specific person in your organization set as the operator. This allows someone to speak personally with a professional in your organization who is familiar with the business processes or structure of the business area to which the auto attendant is meant to work within.

Users can use auto attendants to search the company directory by name or extension. You configure dial scope to note who should be included in the searchable directory available to callers. This would be useful to make sure your C-suite executives' direct lines aren't directly reachable by callers, for example.

Creating an auto attendant

Creating auto attendants involves a few more steps than creating a call queue. Follow these steps to create an auto attendant in the Microsoft Teams admin center:

1. Go to the Teams admin center at `https://admin.teams.microsoft.com`.

2. Select **Voice | Auto attendants** from the left-hand menu.

3. Click **Add**.

4. Name your auto attendant.

5. Choose an operator (optional) for the auto attendant if you want users to be able to opt to speak with an associated individual instead of the auto attendant. This can be set to **No operator**, **Person in organization**, **Voice app** (another auto attendant or call queue), or **External phone number**.

6. Choose the auto attendant's assigned **Time zone** and **Language** from the corresponding drop-down menus.

7. Choose whether to enable voice inputs or stick with strictly numeric button inputs.

So far, you should have completed the steps shown in *Figure 13.7*:

Figure 13.7 – The general information section of creating a new auto attendant

8. Click **Next** to proceed to the **Call flow** settings.

9. Set the greeting message to either **No greeting**, **Play an audio file** (you'll upload if selected), or **Add a greeting message** (for text-to-voice).

10. Choose either **Disconnect**, **Redirect call** (to a person, voice app, external number, or voicemail), or **Play menu options**.

11. If you choose **Play menu options**, you'll need to either upload a recording of the options being read aloud with their corresponding numbers or type in the message to be narrated with text-to-voice technology. Click **Assign a dial key** for each number that will be configured to redirect to a person, voicemail, app, operator, or external account, as shown in *Figure 13.8*. You can also configure an announcement as typed text that will be read aloud when the corresponding number is chosen.

Figure 13.8 – Call flow settings for a new auto attendant where menu options are being configured

12. Click **Submit** if you're done, or **Next** if you want to configure the following optional settings:

  I.   Business hours (days and times to be regarded as *defaults* as far as call flow is concerned)

  II.   After-hours call flow (repeat of *Step 9* to *Step 11*, but for the special handling of off-hours calls)

  III. Holiday call flow (repeat of *Step 9* to *Step 11*, but for the handling of calls during holiday breaks you specify)

  IV.   Dial scope (who is searchable by name or extension in the directory, specified individually or by group for inclusion or exclusion)

  V.   Resource accounts (add an existing or new resource account to associate with the auto attendant)

In order for your auto attendant to have a number, you need to be sure to complete optional *Step 12 | V*. You will have needed to have ordered or transferred a service number(s) in advance and assigned those to resource accounts you already created as mentioned in the *Prepare for call queues and auto attendants* subsection earlier in this chapter.

After your auto attendant is created, you'll find it listed among the rest you've created by repeating *Step 1* and *Step 2*. You can come back here to edit the auto attendant's settings at any time.

Summary

In this chapter, we covered call park, calling, and caller ID policies as well as user voice settings. These features enhance user capabilities in your organization and can be configured differently for various users and groups.

We also reviewed dial plans and the Health Dashboard for Direct Routing (which only applies to environments utilizing direct routing on-premises).

In the latter part of the chapter, we focused on resource accounts used for things such as call queues and auto attendants that provide a more efficient experience for both the caller and recipient(s).

We then took a deeper dive into the configuration and management of call queues and auto attendants. These are assigned to resource accounts with phone numbers.

In the next chapter, we'll cover troubleshooting various areas in Teams.

Practice questions

1. An auto attendant can read typed text aloud for greetings and menu options so that you don't need to record (and re-record) and upload audio files. True or false?

   A.   True

   B.   False

2. You've been asked to create a general service desk number that features an automated greeting and hold music when users call. The call must not have menu options once the call is received by the service desk. You'll need to create at least three of the following items to accomplish the goal – what are the most appropriate items to create (select all that apply)?

   A.   An auto-attendant

   B.   A call queue

   C.   A call park

   D.   A resource account

   E.   A service number (call queue type)

   F.   A service number (auto-attendant type)

3. Your users need to be able to place a call on hold, then transfer it to other users. What do you create for those users who need that ability?

   A.   Caller ID policy

   B.   Call park policy

   C.   Calling policy

   D.   Voice routing policy

4. You have a certain set of users in the organization who should not be interrupted during a call by another call coming in. The caller who would otherwise interrupt should be given a busy signal. What do you configure for the users who are not to be interrupted during calls and meetings?

   A.   Dial plan

   B.   Call park policy

   C.   Calling policy

   D.   Voice routing policy

5. You need to make sure outgoing calls from your organization show up on recipients' phones with a centralized, auto attendant phone number rather than the caller's specific, individual phone number. What do you create?

    A.   Caller ID policy

    B.   Call park policy

    C.   Calling policy

    D.   Voice routing policy

6. Your help desk staff are using the Longest idle setting in their call queue to determine which agent receives the next call to the queue. One of your agents uses Skype for Business and can communicate with others users and make calls, but they're not receiving any calls from the call queue. What is the cause?

    A.   The user needs to update their Skype client.

    B.   The user needs an additional license.

    C.   Longest idle doesn't work with Skype for Business.

    D.   Call queues don't work with Skype for Business.

7. Agents who use Skype for Business will only receive calls from a call queue if which of the following routing methods are used (select all that apply)?

    A.   Attendant routing

    B.   Serial routing

    C.   Round robin

    D.   Longest idle

8. Which of the following can be used to specify the agents to receive calls in a particular call queue (select all that apply)?

    A.   Security group

    B.   Distribution list

    C.   Teams team members

    D.   M365/O365 group

9. You need auto attendant calls to be handled differently for an upcoming holiday in which most offices will be closed. What two actions should you take?

   A.   Create a work schedule in Microsoft Teams Shifts.

   B.   Create a holiday (Voice | Holidays or via auto attendant settings).

   C.   Update the auto attendant's Call flows during holidays settings.

   D.   Update the auto attendant's Call flow for after hours settings.

10. Only an admin can set up a user's phone delegation settings. True or false?

   A.   True

   B.   False

Further reading

- What is Phone System:

  `https://docs.microsoft.com/en-us/microsoftteams/what-is-phone-system-in-office-365`

- Shared line appearance in Microsoft Teams:

  `https://docs.microsoft.com/en-us/microsoftteams/shared-line-appearance`

- Manage resource accounts in Microsoft Teams:

  `https://docs.microsoft.com/en-us/microsoftteams/manage-resource-accounts`

- Create a call queue:

  `https://docs.microsoft.com/en-us/microsoftteams/create-a-phone-system-call-queue`

- Set up an auto attendant:

  `https://docs.microsoft.com/en-us/microsoftteams/create-a-phone-system-auto-attendant`

- Answer auto attendant and call queue calls directly from Teams:

  `https://docs.microsoft.com/en-us/microsoftteams/answer-auto-attendant-and-call-queue-calls`

- Small business example – Set up an auto attendant:

  ```
  https://docs.microsoft.com/en-us/microsoftteams/tutorial-
  org-aa
  ```

- Plan for Teams auto attendants and call queues:

  ```
  https://docs.microsoft.com/en-us/microsoftteams/what-are-
  phone-system-auto-attendants
  ```

- Call park and retrieve in Microsoft Teams:

  ```
  https://docs.microsoft.com/en-us/microsoftteams/call-park-
  and-retrieve
  ```

- Calling policies in Microsoft Teams:

  ```
  https://docs.microsoft.com/en-us/microsoftteams/teams-
  calling-policy
  ```

- Manage caller ID policies in Microsoft Teams:

  ```
  https://docs.microsoft.com/en-us/microsoftteams/caller-id-
  policies
  ```

- Set the Caller ID for a user:

  ```
  https://docs.microsoft.com/en-us/microsoftteams/set-the-
  caller-id-for-a-user
  ```

- How can caller ID be used in your organization:

  ```
  https://docs.microsoft.com/en-us/microsoftteams/how-can-
  caller-id-be-used-in-your-organization
  ```

- Health Dashboard for Direct Routing:

  ```
  https://docs.microsoft.com/en-us/microsoftteams/direct-
  routing-health-dashboard
  ```

- Monitor and troubleshoot Direct Routing:

  ```
  https://docs.microsoft.com/en-us/microsoftteams/direct-
  routing-monitor-and-troubleshoot
  ```

- Understand calling in Microsoft Teams:

  ```
  https://docs.microsoft.com/en-us/microsoftteams/tutorial-
  calling-in-teams
  ```

- Manage voice mail settings for a user in Exchange Online:

  `https://docs.microsoft.com/en-us/exchange/voice-mail-unified-messaging/set-up-voice-mail/manage-voice-mail-settings`

- Set up Cloud Voicemail:

  `https://docs.microsoft.com/en-us/microsoftteams/set-up-phone-system-voicemail`

- Manage audio settings in a Teams meeting:

  `https://support.microsoft.com/en-us/office/manage-audio-settings-in-a-teams-meeting-6ea36f9a-827b-47d6-b22e-ec94d5f0f5e4`

- Calling policies in Microsoft Teams:

  `https://docs.microsoft.com/en-us/microsoftteams/teams-calling-policy`