

Deployment and Configuration for Citrix Environments

Version 2026.2

Table of contents

Overview	4
App deployment	4
System configurations	4
Audio channel deployment and configuration	5
Dragon virtual extensions	5
Package contents	8
Requirements	9
Citrix server and virtual desktop	9
Client end point	9
Network requirements	10
Virtual channel allow list	10
Dragon audio channel installation	11
PowerMic control channel installation	12
Configuring the Citrix native audio channel and automatic device splitting - Citrix Virtual Apps and Desktops	13
Creating a policy to allow client audio and microphone redirection	13
Configuring automatic device splitting	13
Configuring USB redirection - Citrix Virtual Apps and Desktops	16
Creating a USB redirection policy	16
Configuring USB redirection	16
Device IDs	17
Silent setup	19
Installation	19
Uninstalling	19
Supported microphones	20
Third-party microphones	20
Troubleshooting audio	22
Common issues	22
Verifying the installation	22
Citrix client doesn't start	24
Microphone unavailable	24
Record/playback doesn't work	25

App performance and stability issues	26
Contacting support	26
Troubleshooting PowerMic controls	28
Common issues	28
Verifying the installation	28
Contacting support	29
Medical device disclaimer	30

Overview

In a Citrix environment, the speech recognition app can be hosted on a Citrix server or virtual desktop. The client end point can be a thick client running a Microsoft Windows operating system, a thin client running a Linux/Microsoft Windows Embedded operating system or a zero client with no operating system. Regardless of your virtualization technology and architecture, you must be able to deliver audio from the client end point to the hosted app; for more information, see [Audio channel deployment and configuration](#).

App deployment

Apps or desktops that are hosted in a virtualized environment are displayed as a bit map image via a receiver or remote desktop app.

This has the following implications:

- Your speech recognition app isn't installed on the client end point, but on the Citrix server/virtual desktop.
- Your speech recognition app isn't installed where the microphone is plugged in.
- If your speech recognition app sends recognized text to a target app (for example, a clinical documentation program or word processor), the speech recognition app must be installed on the same server or virtual desktop image as the target app to be able to access the target app's text controls.

System configurations

The following system configurations are supported:

- Single hop configuration (described in this guide): Your speech recognition app is hosted on a Citrix Virtual App server and streamed to the client end point (for example, a Microsoft Windows PC or thin client).
- Double hop configuration: Your speech recognition app is hosted on a Citrix Virtual App server (second hop) and delivered to a Citrix or VMware/Omnissa virtual desktop or Citrix Virtual App server (first hop), which is then streamed to the client end point (for example, a Microsoft Windows PC or thin client). For more information, see *Double Hop Configuration for Citrix Environments*.

Audio channel deployment and configuration

To deliver audio from the client end point to the hosted app, the following options are available:

- Recommended: [Install the Dragon Citrix Client Audio Extension](#) on the client end point (for example, a Microsoft Windows PC or IGEL thin client). For more information, see: [Dragon virtual extensions](#)
- [Configure the Citrix native audio channel and automatic device splitting](#) on the client end point (for example, zero clients or Linux thin clients).
- [Configure USB redirection](#) on the client end point (for example, zero clients).

Note: We don't recommend using USB redirection because it depends on the state of the network and is therefore unreliable. In addition, some devices require a high network throughput even when they're idle. Audio devices work better with the native audio channel.

Note: In Windows Server 2019 and higher, apps must be given explicit access to hardware devices via Group Policy. To allow the speech recognition app to access the microphone device that's passed into the VDI session, create a Group Policy Object (GPO) for all users to set the registry key `HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\CapabilityAccessManager\ConsentStore\microphone` to `Allow`; this can then be applied to all servers.

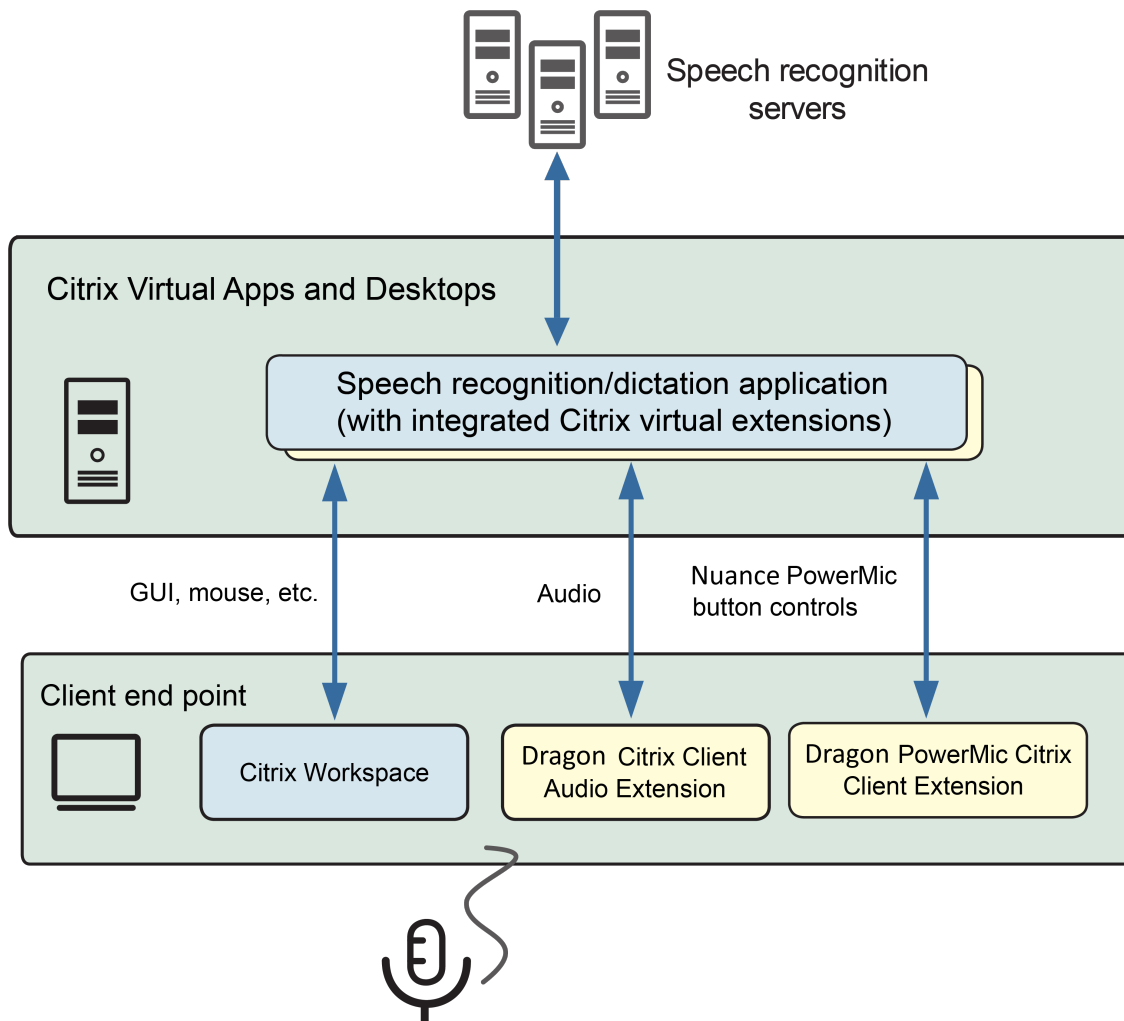
Dragon virtual extensions

The Dragon Citrix Client Audio Extension and Dragon PowerMic Citrix Client Extension provide custom audio and microphone button channels for the following products:

- Citrix Virtual Apps and Desktops
- Microsoft Windows and Windows Embedded operating systems
- The following speech recognition apps:
 - Dragon Medical One Desktop Application
 - Dragon Medical Direct
 - Dragon Case and Care
 - Apps based on Dragon Medical SpeechKit (.NET and COM editions)
 - Apps based on SpeechMagic SDK

Make sure you've configured the [Virtual channel allow list](#) policy setting in Citrix Studio before you start working with a speech recognition app.

For more information on hardware, software and network requirements, see: [Requirements](#).



Audio channels

High quality audio is required for accurate speech recognition. Regardless of the virtualization technology and architecture, you must be able to deliver audio from the client end point to the app hosted on the server.

Native audio channels can require between 150 kbps and 1 Mbps bandwidth between the client end point and the hosted app. The Dragon Citrix Client Audio Extension reduces the bandwidth requirement to 19.2-27.8 kbps (depending on the sound format).

The corresponding improvements in app responsiveness and performance are critical to the user experience.

Microphone control channels

Microphone buttons, sliders and other controls must be routed separately to the speech recognition app.

To enable this for the Nuance PowerMic in a Citrix Virtual Apps and Desktops system, the [Dragon PowerMic Citrix Client Extension](#) provides a custom channel for Nuance PowerMic button controls.

For Philips and Grundig devices, [third party redistributable packages](#) are available.

For third-party devices, [configure USB redirection](#) or [automatic device splitting](#). We recommend configuring device splitting on Linux thin clients; configure USB redirection only if the Linux thin client doesn't support device splitting.

Package contents

Dragon Citrix Client Audio Extension

A virtual audio channel for Citrix Virtual Apps and Desktops systems:

- Client component:
Dragon Citrix Audio and Button Extensions\Client\Client Windows folder, Dragon Citrix Client Audio Extension.exe

For more information on how to install the Dragon Citrix Client Audio Extension, see: [Audio channel installation](#).

Dragon PowerMic Citrix Client Extension

A virtual channel for Nuance PowerMic and Philips SpeechMike button controls in a Citrix Virtual Apps and Desktops system:

- Client component (Dragon PowerMic Citrix Client Extension):
Dragon Citrix Audio and Button Extensions\Client\Client Windows folder, Dragon PowerMic Citrix Client Extension.msi

For more information on how to install the Dragon PowerMic Citrix Client Extension, see: [PowerMic control channel installation](#).

Third-party device drivers

- Redistributable packages for Philips and Grundig devices. For more information, see: [Supported microphones](#).

Requirements

Important: For security reasons, make sure that VDI channel encryption is enabled between client end points and VDI servers or virtual desktops. Disabling encryption in a virtualized environment can lead to confidential data being exposed. Encryption is enabled by default.

Citrix server and virtual desktop

- One of the following operating systems:
 - Microsoft Windows 10
 - Microsoft Windows 11
 - Microsoft Windows Server 2016
 - Microsoft Windows Server 2019
 - Microsoft Windows Server 2022
 - Microsoft Windows Server 2025
- One of the following Citrix environments:
 - Citrix Virtual Apps and Desktops 2311 or higher
 - Citrix Virtual Apps and Desktops 1912 LTSR or higher

Client end point

- Sound card or USB audio device. For more information, see: [Supported microphones](#).
- One of the following operating systems:
 - Microsoft Windows 10
 - Microsoft Windows 11
 - Microsoft Windows Server 2016
 - Microsoft Windows Server 2019
 - Microsoft Windows Server 2022
- Citrix client:
 - Windows Current Release: Workspace app version supported by Citrix for Windows Current Release
 - Windows Long Term Service Release: Workspace app version supported by Citrix for Windows Long Term Service Release

Network requirements

- Minimum Citrix client to Citrix server bandwidth for audio data:
 - CELP: 19.2 kbps
 - Speex: 28 kbps
 - PCM 8 kHz: 128 kbps
 - PCM 16 kHz: 256 kbps
- Network latency must not exceed 50 ms.

Virtual channel allow list

Starting with Citrix Virtual Apps and Desktops 2109, the **Virtual channel allow list** policy setting is enabled by default. This means that custom/third-party virtual channels no longer work with the default configuration; you must either add the Nuance virtual channels to the allow list or disable the **Virtual channel allow list** policy. For more information, see the Citrix documentation on [obtaining virtual channel names and processes](#) and the [relevant Citrix blog post](#).

To configure the **Virtual channel allow list** policy setting in Citrix Studio, do the following:

1. In the tree view, select and hold (or right-click) **Policies** and select **Create Policy**.
2. Search for the **Virtual channel allow list** policy and select **Select**.
3. To disable the policy and allow all third-party virtual channels, select **Disabled**.

Disabling the policy is the preferred option; if this isn't possible in your organization, leave the policy enabled and specify the following Nuance virtual channels in the text box:

```
NUAREC,<path>\SoD.exe
NUAPLAY,<path>\SoD.exe
NUACOM,<path>\SoD.exe
PMICIIB,<path>\SoD.exe
PSPCTRL,<path>\SoD.exe,<path>\Philips.SpeechMike\PSPDDispatcherS.exe
PSPCTR2,<path>\SoD.exe,<path>\Philips.SpeechMike\PSPDDispatcherS.exe
```

Note: <path> stands for the location of the app on the server that uses the virtual channel.

4. Select **OK** > **Next**.
5. Assign the policy to a specific delivery group (Citrix server) and select **Next**.
6. Enable the policy and select **Finish**.
7. Restart the Citrix server you applied the policy to.

Dragon audio channel installation

Install the Dragon Citrix Client Audio Extension on the client end point (i.e. on the PC operating system, not the virtual desktop).

Note: Make sure that Citrix Workspace app 1912 LTSR or higher is already installed on the client end point; see: [Requirements](#). Citrix Workspace must not be running during the installation of the Dragon Citrix Client Audio Extension.

Proceed as follows:

1. Log on to the client end point as an administrator.
2. Open the Dragon Citrix Audio and Button Extensions\Client\Client Windows folder and select Dragon Citrix Client Audio Extension.exe.
3. Follow the installation wizard.
4. Make sure the device you want to use is selected as the default recording device on the client end point (Control Panel > **Sound** > **Recording**).

Remarks

- If you upgrade the Citrix client, you must reinstall the Dragon Citrix Client Audio Extension.
- Microphone buttons and other controls require a separate channel. For more information, see: [PowerMic control channel installation](#) and [Supported microphones](#).
- The extension doesn't need to be installed on the server/virtual desktop; the required server binaries are already included in the app folder.

PowerMic control channel installation

To use a microphone with buttons or other controls, install the corresponding device driver/redistributable package with Citrix Virtual Apps and Desktops support on the Citrix server/virtual desktop and client end point. See also: [Third party microphones](#).

For Nuance PowerMic, install the Dragon PowerMic Citrix Client Extension on the client end point (i.e. on the PC operating system, not the virtual desktop). This configures a custom channel to route button controls from the Nuance PowerMic to the hosted app.

Note: Make sure that a Citrix Workspace app version supported by Citrix is already installed on the client end point; see: [Requirements](#). Citrix Workspace must not be running during the installation of the Dragon PowerMic Citrix Client Extension.

Proceed as follows:

1. Log on to the client end point as an administrator.
2. Open the Dragon Citrix Audio and Button Extensions\Client\Client Windows folder and select Dragon PowerMic Citrix Client Extension.msi.
3. Follow the installation wizard.

Remarks

- The extension doesn't need to be installed on the server/virtual desktop; the required server binaries are already included in the app folder.
- If you upgrade the Citrix client, you must reinstall the Dragon PowerMic Citrix Client Extension.
- Firmware upgrade is not supported in a Citrix environment.
- In some cases the focus is lost and PowerMic buttons aren't recognized if the app is started in the background after a session is reconnected. Press ALT + TAB until the focus is regained.

Configuring the Citrix native audio channel and automatic device splitting - Citrix Virtual Apps and Desktops

To deliver audio via the Citrix native channel and redirect button controls via device splitting, from the client end point to a Citrix server, do the following:

1. In Citrix Studio:
 - [Create a policy to allow USB redirection](#) for a specific device and for specific users.
 - [Create a policy to allow client audio and microphone redirection](#).
2. [Configure automatic device splitting](#) on the client end point.

Creating a policy to allow client audio and microphone redirection

Proceed as follows:

1. On the Delivery Controller for your Citrix system, start Citrix Studio.
2. In the tree view, select **Policies > Create Policy**.
3. On the **Settings** page, select **All Settings** in the drop-down box.
4. Select **ICA/AudioSelect > Client audio redirection > Allowed > OK**.
5. Select **Client microphone redirection > Allowed > OK**.
6. Select **Next**, assign the delivery group for the new policy and select **Next**.
7. On the **Summary** page, enter a name for the new policy; for example: *Allow client audio and microphone redirection - delivery group*.
8. Enable the policy and select **Finish**.
9. Rank the new policy higher than the [Allow USB redirection - delivery group policy](#).
10. Select **Finish**.

Configuring automatic device splitting

Proceed as follows:

1. On the client end point, make sure the audio device is connected and switched on.
2. Copy the CitrixBase.admx and receiver.admx files from C:\Program Files (x86)\Citrix\ICA Client\Configuration\ to C:\Windows\PolicyDefinitions\.
3. Copy the CitrixBase.adml and receiver.adml files from C:\Program Files (x86)\Citrix\ICA Client\Configuration\en-US to C:\Windows\PolicyDefinitions\en-US.
4. In the Group Policy Editor, browse for Computer Configuration\Administrative Templates\Citrix Components\Citrix Workspace\Remoting client devices\Generic USB Remoting and select **SplitDevices**. Enable this setting.
5. To enable automatic device splitting for the audio device each time the Citrix session is started, select **USB Device Rules** and enter the corresponding rule:

Device	Rule
Nuance PowerMic II and III	CONNECT: vid=0554 pid=1001 split=1 intf=03
Nuance PowerMic II with barcode scanner	CONNECT: vid=0554 pid=1002 split=1 intf=03;CONNECT: vid=0554 pid=1004
Nuance PowerMic 4	CONNECT: vid=0554 pid=0064 split=1 intf=04
Philips SpeechMike III and Premium	CONNECT: vid=0911 pid=0c1c split=1 intf=04
Grundig Digta SonicMic 3	CONNECT: vid=015d8 pid=002a split=1 intf=03
VEC foot controls	CONNECT: vid=05f3 pid=00ff
Philips Foot Control ACC2320	CONNECT: vid=0911 pid=1844
Philips Foot Control ACC2330	CONNECT: vid=0911 pid=091a

6. Select **Existing USB Devices > Enabled > Connect all available USB devices > OK**.
7. Select **New USB Devices > Enabled > Connect the USB device > OK**.
8. On the client end point, connect to the Citrix server and start a published app.

Remarks

- For more information about configuring device splitting for zero clients, contact your vendor.
- Only automatic device splitting is supported. As manual device splitting leads to audio issues when working with standby mode, it's not supported.
- In case of issues during playback (for example, when there are gaps in playback or the playback speed is faster than normal), disable the **Audio over UDP real-time transport** policy in Citrix

Studio (see: [Audio policy settings](#)). For more information about the Citrix audio features, see: <https://docs.citrix.com/en-us/xenapp-and-xendesktop/7-15-ltsr/multimedia/audio.html>

Configuring USB redirection - Citrix Virtual Apps and Desktops

To configure USB redirection from the client end point to a Citrix server (for example, if you use a server operating system such as Microsoft Windows Server as a virtual desktop), do the following:

1. In Citrix Studio, [create a policy to allow USB redirection](#) for a specific device and for specific users.
2. [Configure USB redirection](#) on the client end point and Citrix server.

Creating a USB redirection policy

Proceed as follows:

1. On the Delivery Controller for your Citrix system, start Citrix Studio.
2. In the tree view, select **Policies > Create Policy**.
3. On the **Settings** page, select **(All Versions)** and **USB Devices** in the two drop-down lists.
4. Select **Client USB device redirection > Select**. The corresponding dialog box is displayed.
5. Select **Allowed > OK**.
6. Select **Client USB device redirection rules > Select**. The corresponding dialog box is displayed.
7. Enter the device ID as follows (PowerMic II example): *ALLOW: VID0554 PID1001*. For a list of USB devices and their corresponding IDs, see: [Device IDs](#).
8. Select **OK > Next**.
9. On the **Users and Machines** page, assign the delivery group for the new policy and select **Next**.
10. On the **Summary** page, enter a name for the new policy; for example: *Allow USB redirection - delivery group*
11. Select **Finish**.

Configuring USB redirection

For information on configuring USB redirection for Linux thin clients, see the documentation delivered with the product.

To configure USB redirection (for example, for Microsoft Windows clients), do the following:

1. On the client end point, make sure the audio device is connected and switched on.
2. Create a new registry setting (example for PowerMic II):
 - Key (64-bit Windows): HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Citrix\ICA Client\GenericUSB\Devices\VID0554 PID1001
 - Key (32-bit Windows): HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ICA Client\GenericUSB\Devices\VID0554 PID1001
 - DWORD value: AutoRedirect = 1
3. Copy the CitrixBase.admx and receiver.admx files from C:\Program Files (x86)\Citrix\ICA Client\Configuration\ to C:\Windows\PolicyDefinitions\ and the CitrixBase.adml and receiver.adml files from C:\Program Files (x86)\Citrix\ICA Client\Configuration\en-US to C:\Windows\PolicyDefinitions\en-US.
4. In the Group Policy Editor, browse for Computer Configuration\Administrative Templates\Citrix Components\Citrix Workspace\User experience and select **Audio through Generic USB Redirection**. Enable this setting.
5. Start Citrix Workspace and connect to the Citrix server.
6. Start your app and select the message displayed in the notification area; a dialog box opens.
7. Select the device you want to use and select **Connect**.
8. Select and hold (or right-click) the Citrix Workspace icon in the notification area and open **Citrix Connection Center**.
9. In the **Citrix Connection Center** dialog box, select **Preferences**.
10. Open the **Devices** tab to make sure the device you want to use is listed.
11. Select **Switch to generic** (if this option is displayed in the **Virtual Channel** column) to make sure the device is redirected to the Citrix server. The device drivers are installed on the Citrix server.
12. Open the **Connections** tab and select **When a session starts, connect devices automatically** and **When a new device is connected while a session is running, connect the device automatically**.
13. Disconnect from the Citrix server, restart Citrix Workspace and reconnect to the Citrix server.

Note: If the client end point is a 32-bit operating system, the audio redirection might not be supported, but the device buttons work properly.

Device IDs

The following device IDs are used when creating a USB redirection policy:

Device	ID
Nuance PowerMic II	VID0554 PID1001
Nuance PowerMic III	VID0554 PID1001
Nuance PowerMic II with barcode scanner	VID0554 PID1002
Nuance PowerMic 4	VID0554 PID0064
Philips SpeechMike Air	VID0911 PID0BB8
Philips SpeechMike Premium	VID0911 PID0C1C
Philips SpeechMike III	VID0911 PID0C1C
VEC foot controls	VID05F3 PID00FF
Philips Foot Control FSW2320	VID0911 PID1844
Philips Foot Control FSW2330	VID0911 PID091A

Silent setup

Installation

You can install the Dragon Citrix Client Audio Extension and Dragon PowerMic Citrix Client Extension via the command line. For example:

- Dragon Citrix Client Audio Extension
`"<path>\Dragon Citrix Client Audio Extension.exe" -i -q -l log.txt`
- Dragon PowerMic Citrix Client Extension
`msiexec /i "<path>\Dragon PowerMic Citrix Client Extension.msi" /qn /l*v log.txt`

Remarks

- The `/l` option enables logging. If you enable logging, you must specify a log file name (log.txt in these examples).
- By default, Dragon Citrix Client Audio Extension can't be installed on Windows Server operating systems. To enforce its installation, use the `SKIP_OSCHECK=1` parameter.
- Use the `-norestart` parameter to suppress the automatic restart of the computer if the Dragon extension setups require a restart.

Uninstalling

You can uninstall the Dragon Citrix Client Audio Extension and Dragon PowerMic Citrix Client Extension via the command line. For example:

- Dragon Citrix Client Audio Extension
`"<path>\Dragon Citrix Client Audio Extension.exe" /uninstall -i -q -l log.txt`
- Dragon PowerMic Citrix Client Extension
`msiexec /x "<path>\Dragon PowerMic Citrix Client Extension.msi" /qn /l*v log.txt`

Note: Use the `-norestart` parameter to suppress the automatic restart of the computer if the Dragon extension setups require a restart.

Supported microphones

	Citrix Virtual App		Citrix Virtual Desktop	
	Audio	Controls	Audio	Controls
Nuance PowerMic II	yes	yes*	yes	yes*
Nuance PowerMic II with barcode scanner	yes	yes*	yes	yes*
Nuance PowerMic III	yes	yes*	yes	yes*
Nuance PowerMic 4	yes	yes*	yes	yes*
Philips SpeechMike Air	yes	yes	yes	yes
Philips SpeechMike Premium	yes	yes	yes	yes
Philips SpeechMike III	yes	yes	yes	yes
Grundig Digta SonicMic II	yes	yes**	yes	yes**
Grundig Digta SonicMic II (US edition)	yes	yes**	yes	yes**
Grundig Digta SonicMic 3	yes	yes**	yes	yes**

* To enable Nuance PowerMic controls, [install the Dragon PowerMic Citrix Client Extension](#).

** To enable button controls for third-party devices, install the corresponding redistributable packages.

Third-party microphones

The Dragon 3rd party device drivers folder contains redistributable packages for Philips and Grundig devices.

Install the redistributables on the Citrix server/virtual desktop where your app is hosted and on the client end point. For more information, see the documentation delivered with the redistributable package.

Note: The quality of third-party device drivers is the responsibility of the device vendor. Microsoft doesn't guarantee that third-party drivers are error free and suitable for your requirements. Redistributed drivers

might not be the most recent versions; contact your vendor for up-to-date drivers that support your speech recognition system.

Troubleshooting audio

This section deals with problems related to the Citrix virtual audio channel. For problems with button controls on Nuance PowerMic devices, see: [Troubleshooting PowerMic controls](#).

Common issues

In case of problems, make sure of the following:

- The Dragon Citrix Client Audio Extension is correctly installed. For more information, see: [Verifying the installation](#).
- The Dragon Citrix Client Audio Extension was installed after Citrix Workspace app. If Citrix Workspace is reinstalled, the Dragon Citrix Client Audio Extension must also be reinstalled. If Citrix Workspace is updated manually or automatically, the Dragon Citrix Client Audio Extension doesn't need to be reinstalled.

- USB redirection is disabled:

You can't use USB redirection together with the Dragon Citrix Client Audio Extension. USB redirection removes the audio device from the client and adds a virtual audio device on the server. For more information, see: [Record/playback not working](#).

Note: You can use the Citrix built-in virtual channel together with the Dragon Citrix Client Audio Extension.

- The audio device you want to use is listed as the default audio device on the client end point, and this device is also available to the app hosted on the server. For more information, see: [Microphone unavailable](#).

Verifying the installation

Citrix client

To verify that the Dragon Citrix Client Audio Extension is correctly installed on the client end point, do the following:

1. On the client end point, open the Control Panel and select **Programs and Features**.
2. Check that **Dragon Citrix Client Audio Extension** is listed.
3. Check that the version number corresponds to your download.

4. Go to C:\Program Files (x86)\Citrix\ICA Client folder (64-bit Windows) and check that the following files exist:

```
NuCaCitrixCommunication.dll
NuCaCitrixPlayer.dll
NuCaCitrixRecorder.dll
NuCaVDIClient.dll
Microsoft.CognitiveServices.Speech.core.dll
Microsoft.CognitiveServices.Speech.extension.audio.sys.dll
Microsoft.CognitiveServices.Speech.extension.codec.dll
Microsoft.CognitiveServices.Speech.extension.kws.dll
Microsoft.CognitiveServices.Speech.extension.kws.ort.dll
Microsoft.CognitiveServices.Speech.extension.lu.dll
nuance_highfa.table
```

5. Open the Registry Editor.

6. Browse for (64-bit Windows):

```
HKEY_LOCAL_
MACHINE\SOFTWARE\Wow6432Node\Citrix\ICA Client\Engine\Configuration\Advanced\
Modules\ICA 3.0
```

Check that the VirtualDriverEx value contains the following:

```
NuCaCitrixCommunication
NuCaCitrixRecorder
NuCaCitrixPlayer
```

Note: The VirtualDriverEx value can have multiple values, separated by comma.

7. Browse for (64-bit Windows):

```
HKEY_LOCAL_
MACHINE\SOFTWARE\Wow6432Node\Citrix\ICA Client\Engine\Configuration\Advanced\
Modules\NuCaCitrixCommunication
```

Check the following values:

```
DriverNameWin32 = NuCaCitrixCommunication.dll
DriverName = Unsupported
DriverNameWin16 = Unsupported
```

8. Browse for (64-bit Windows):

```
HKEY_LOCAL_
MACHINE\SOFTWARE\Wow6432Node\Citrix\ICA Client\Engine\Configuration\Advanced\
Modules\NuCaCitrixPlayer
```

Check the following values:

```
DriverNameWin32 = NuCaCitrixPlayer.dll
```

```
DriverName = Unsupported  
DriverNameWin16 = Unsupported
```

9. Browse for (64-bit Windows):

```
HKEY_LOCAL_  
MACHINE\SOFTWARE\Wow6432Node\Citrix\ICA Client\Engine\Configuration\Advance  
d\Modules\NuCaCitrixRecorder
```

Check the following values:

```
DriverNameWin32 = NuCaCitrixRecorder.dll  
DriverName = Unsupported  
DriverNameWin16 = Unsupported
```

Citrix client doesn't start

- After you install the Dragon Citrix Client Audio Extension, the Citrix client doesn't start.

Make sure the Dragon Citrix Audio Extension is correctly installed; for more information, see: [Verifying the installation](#).

Microphone unavailable

- The audio device isn't available to the speech recognition app. Proceed as follows:
 1. Make sure the audio device is switched on and connected to the client end point.
 2. Make sure your system fulfills the [Requirements](#).
 3. Make sure the speech recognition app has permission to use the audio device.
 4. Make sure the Dragon Citrix Audio Extension is correctly installed; for more information, see: [Verifying the installation](#).

- Your speech recognition app lists an audio device, but not the one you want to use.

The Dragon Citrix Client Audio Extension always uses the default device on the client end point. To verify/set the default audio device, do the following:

1. Make sure the audio device is switched on and connected to the client end point.
2. On the client end point, open the Control Panel and select **Sound**.
3. Open the **Recording** tab and make sure the device you want to use is set as the default device.
4. Open the **Playback** tab and make sure the device you want to use is set as the default device.

Record/playback doesn't work

- Recording and playing back audio work at first, but a failure occurs during record or playback.

See: [App performance and stability issues](#).

- Recording and playing back audio don't work.

Proceed as follows:

1. Make sure the audio device is switched on and connected to the client end point.
2. Make sure your system fulfills the [Requirements](#).
3. Make sure the Dragon Citrix Audio Extension is correctly installed; for more information, see: [Verifying the installation](#).

- Recording and playing back audio don't work, even though the audio device appears available to your speech recognition app.

Proceed as follows:

1. Make sure the audio device is switched on and connected to the client end point.
2. On the client end point, open the Control Panel and select **Sound**.
3. Open the **Recording** tab.

If the device isn't listed, you have USB redirection enabled and the device is redirected to the Citrix server (bypassing the Dragon Citrix Audio Extension). To use the device with the Dragon Citrix Audio Extension, disable USB redirection.

- Recording doesn't start; a **Device in use** error is displayed.

The audio device is in use by another process.

Make sure that other processes aren't using the recording device when you start to record.

- Half-duplex devices (e.g. Philips SpeechMike with firmware lower than version 1.25): Recording doesn't start; a **Device in use** error is displayed.

Another app might be playing audio.

Upgrade the device firmware, and/or make sure that different devices are selected as default devices for recording and playing back audio.

- Nuance PowerMic: Recording or playing back audio doesn't work, but the LED on the device comes on when you try to record.

This is likely to be a problem with the audio channel and not the device. Proceed as follows:

1. Make sure your system fulfills the [Requirements](#).
2. Make sure the Dragon Citrix Audio Extension is correctly installed; for more information, see: [Verifying the installation](#).

- Nuance PowerMic: Recording and playing back audio work via the app GUI but not via the buttons on the device.

There is a problem with the Dragon PowerMic Citrix Client Extension. See [Troubleshooting PowerMic controls](#).

App performance and stability issues

- Your speech recognition app reacts slowly in general.

This can be caused by low network bandwidth or high latency. Make sure that your network fulfills the [network requirements](#).

This can be caused by your server architecture. Microsoft Windows Server has a longer thread quantum than desktop PCs; this means that foreground apps are not prioritized as much.

By default, apps on a Citrix server get 100% CPU on launch. Therefore, apps that share a core with a newly-launched app are blocked for a short time.

- Your speech recognition app launches slowly or reacts slowly to record/playback start/stop.

This can be caused by low network bandwidth or high latency. Make sure that your network fulfills the [network requirements](#).

Make sure your Citrix client is up-to-date. The Citrix client app typically handles approximately 30 channels, including the GUI, mouse, and audio channels. Each of these channels can delay all other channels if there's a delay in returning from the client channel callback. For example, Citrix Online Client version 12 or older can cause such issues.

- Your speech recognition app stops with an error during recording.

This can be caused by low network bandwidth or high latency. Make sure that your network fulfills the [network requirements](#).

This can be caused by latency peaks. Monitor your network performance over a long enough timeframe to detect latency peaks.

This can be caused by the audio device or the USB port on the client end point. Make sure you have the latest firmware installed. Do a longer recording on the client end point using a different app (e.g. Sound Recorder) to try to replicate the issue.

File-based recording: Make sure that the sound file is located on the server and not on a network share.

Contacting support

When you request support for Citrix-related problems, provide the following information:

- The troubleshooting steps you've already carried out and your results.
- Detailed steps describing how to reproduce the problem.
- The version number of the Dragon Citrix Client Audio Extension.
- The audio devices used.
- The type and operating system versions of thin clients used.
- The Citrix Virtual Apps and Desktops version used on your system.
- The Citrix settings in use: Desktop or Application publishing.
- The Citrix Workspace version used.
- The Citrix server operating system.
- Any special configurations in use; for example, Citrix Provisioning, Citrix versions installed in a double hop scenario.

Troubleshooting PowerMic controls

This section deals with problems related to the button controls on the Nuance PowerMic. For audio problems, see: [Troubleshooting audio](#).

Common issues

In case of problems, check the following:

- The Dragon PowerMic Citrix Client Extension is correctly installed. For more information, see: [Verifying the installation](#).
- The Dragon PowerMic Citrix Client Extension was installed after Citrix Workspace. If Citrix Workspace is reinstalled, the Dragon PowerMic Citrix Client Extension must also be reinstalled. If Citrix Workspace is updated manually or automatically, the Dragon PowerMic Citrix Client Extension doesn't need to be reinstalled.

- USB redirection is disabled:

You can't use USB redirection together with the Dragon PowerMic Citrix Client Extension. USB redirection removes the audio device from the client and adds a virtual audio device on the server. For more information, see: [Troubleshooting audio](#).

Verifying the installation

Citrix client

To verify that the Dragon PowerMic Citrix Client Extension is correctly installed on the client end point, do the following:

1. On the client end point, open the Control Panel and select **Programs and Features**.
2. Check that **Dragon PowerMic Citrix Client Extension** is listed.
3. Open the C:\Program Files (x86)\Citrix\ICA Client folder (64-bit Microsoft Windows) and check that the following files exist:

PowerMicVcClient.dll
pmlog.dll

4. Open the C:\Program Files (x86)\Common Files\Nuance\PowerMic folder and check that the following files exist:

```
PowerMicCtrl.dll
PowerMicHid.dll
pmlog.dll
```

5. Open the Registry Editor.
6. Browse for (64-bit Microsoft Windows):

```
HKEY_LOCAL_
MACHINE\Software\Wow6432Node\Citrix\ICA Client\Engine\Configuration\Advance
d\Modules\ICA 3.0
```

Check that the VirtualDriverEx value contains: PowerMicVcClient

Note: The VirtualDriverEx value can have multiple values, separated by comma.

7. Browse for (64-bit Microsoft Windows):

```
HKEY_LOCAL_
MACHINE\Software\Wow6432Node\Citrix\ICA Client\Engine\Configuration\Advance
d\Modules\PowerMicVcClient
```

Check that DriverNameWin32 is set to: PowerMicVcClient.dll

Contacting support

The PowerMic SDK logging framework was changed; please contact support for instructions on how to enable logging for PowerMic SDK.

When you request support for Citrix-related problems, please provide the following information:

- The troubleshooting steps you've already carried out and your results.
- Detailed steps describing how to reproduce the problem.
- The version number of the Dragon PowerMic Citrix Client Extension.
- The type and operating system versions of thin clients used.
- The Citrix Virtual Apps and Desktops version used on your system.
- The Citrix settings in use: Desktop or Application publishing.
- The Citrix Workspace version used.
- The Citrix server operating system.
- Any special configurations in use; for example, Citrix Provisioning, Citrix versions installed in a double hop scenario.

Medical device disclaimer

Microsoft products and services (1) are not designed, intended or made available as medical devices, and (2) are not designed or intended to be a substitute for professional medical advice, diagnosis, treatment, or judgment and should not be used to replace or as a substitute for professional medical advice, diagnosis, treatment, or judgment.

Some information relates to pre-released products which may be substantially modified before they are commercially released. Microsoft makes no warranties, express or implied, with respect to the information provided here.

© 2026 Microsoft. All rights reserved.