

# Deployment and Configuration for VMware Horizon View Environments

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## Overview

In a VMware environment, the speech recognition application can be hosted on a VMware 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 application; for more information, see [Audio channel deployment and configuration](#).

## Application deployment

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

This has the following implications:

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

## System configurations

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The following system configurations are supported:

- Single hop configuration (described in this guide): Your speech recognition application is hosted on a VMware virtual desktop or server and streamed to the client end point (for example, a Microsoft Windows PC or thin client).
- Double hop configuration: Your speech recognition application is hosted on a Citrix XenApp server (second hop) and delivered to a Citrix/VMware virtual desktop or Citrix XenApp 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 *Nuance - Double Hop Configuration for Citrix Environments*.

## Audio channel deployment and configuration

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

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

**Note:** USB redirection requires high bandwidth and is not reliable in certain environments, such as wireless networks. If possible, use device splitting instead of USB redirection.

## Nuance virtual extensions

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

- VMware Horizon View
- Microsoft Windows and Windows Embedded operating systems
- The following speech recognition applications:
  - Dragon Medical One Desktop Application
  - Dragon Medical Direct
  - Dragon Case and Care
  - Applications based on Dragon Medical SpeechKit (.NET and COM editions)
  - Applications based on SpeechMagic SDK

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 application hosted on the server.

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

The corresponding improvements in application 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 application.

To enable this for the Nuance PowerMic in a VMware Horizon View environment, the [Nuance PowerMic VMware Client Extension](#) provides a custom channel for Nuance PowerMic button controls.

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

# Package contents

## Nuance VMware Client Audio Extension

A virtual audio channel for VMware Horizon View systems:

- Client component:  
Nuance VMware Audio and Button Extensions\Client **folder**, Nuance VMware Client Audio Extension.exe

## Nuance PowerMic VMware Client Extension

A virtual channel for Nuance PowerMic button controls in a VMware Horizon View system:

- Client component:  
Nuance VMware Audio and Button Extensions\Client **folder**, Nuance PowerMic VMware Client Extension.exe

## Third-party device drivers

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

# Requirements

## VMware server

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- VMware Horizon View Agent 7.6 or higher.
- One of the following operating systems:
  - Microsoft Windows Server 2012 R2
  - Microsoft Windows Server 2016
  - Microsoft Windows Server 2019

## Client end point

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- Sound card or USB audio device.
- One of the following operating systems:
  - Microsoft Windows 8
  - Microsoft Windows 8.1
  - Microsoft Windows 10
- VMware Horizon View Client 4.9 or higher.
- VMware Blast Extreme (compatible with Nuance virtual extensions client and server components version 29.2.44.1 or higher and PowerMic SDK 4.6.16.8 or higher).

## Network requirements

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- Minimum VMware client to VMware 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.

## Nuance audio channel installation

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

Proceed as follows:

1. Log on to the client end point as an administrator.
2. Make sure that no other user is logged on to the client end point and that the VMware session (vmware-remotekms.exe process) is not running during the installation of the Nuance VMware Client Audio Extension.
3. Open the Nuance VMware Audio and Button Extensions\Client folder and double-click Nuance VMware Client Audio Extension.exe.
4. Follow the installation wizard.
5. Make sure the device you want to use is selected as the default recording device on the client end point (Control Panel, **Sound** dialog box, **Recording** tab).

### Remarks

- The extension does not need to be installed on the server/virtual desktop; the required server binaries are already included in the application folder.
- Make sure you uninstall the Nuance VMware Server & Virtual Desktop Audio Extension setup unless it is used by other products.
- Microphone buttons and other controls must be redirected separately from the client end point to the virtual desktop. For more information, see: [PowerMic control channel installation](#) and [Configuring device splitting](#).

## PowerMic control channel installation

The Nuance VMware Client Audio Extension configures audio redirection from the microphone to the virtual desktop or server. Microphone buttons and other controls must be redirected separately.

- To enable button controls for the Nuance PowerMic, install the Nuance PowerMic VMware Client Extension on the client end point.
- To enable button controls for third-party devices, install the corresponding device driver/redistributable package with VMware Horizon View support or [configure device splitting](#).

Proceed as follows:

1. Log on to the client end point as an administrator.
2. Open the Nuance VMware Audio and Button Extensions\Client folder and double-click Nuance PowerMic VMware Client Extension.exe.
3. Follow the installation wizard.

### Remarks

- The extension does not need to be installed on the server; the required server binaries are already included in the application folder.



# Silent setup

## Installation

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

- Nuance VMware Client Audio Extension  
`"<path>\Nuance VMware Client Audio Extension.exe" -i -q -l log.txt`
- Nuance PowerMic VMware Client Extension  
`"<path>\Nuance PowerMic VMware Client Extension.exe" -i -q -l log.txt`

The `l` option enables logging. If you enable logging, you must specify a log file name (`log.txt` in these examples).

## Uninstalling

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

- Nuance VMware Client Audio Extension  
`"<path>\Nuance VMware Client Audio Extension.exe" /uninstall -i -q -l log.txt`
- Nuance PowerMic VMware Client Extension  
`"<path>\Nuance PowerMic VMware Client Extension.exe" /uninstall -i -q -l log.txt`

## Supported microphones

	Audio	Controls
Nuance PowerMic II	yes	yes*
Nuance PowerMic II with barcode scanner	yes	yes*
Nuance PowerMic III	yes	yes*
Philips SpeechMike Air	yes	yes**
Philips SpeechMike Premium	yes	yes**
Philips SpeechMike III	yes	yes**
Grundig Digta SonicMic II	yes	yes***
Grundig Digta SonicMic II (US edition)	yes	yes***
Grundig Digta SonicMic 3	yes	yes***
Olympus DirectRec	yes	yes***

\* To enable Nuance PowerMic controls, install the Nuance PowerMic VMware Client Extension.

\*\* To enable button controls for these devices, install the corresponding redistributable packages.

\*\*\* To enable button controls for these devices, [configure device splitting](#).

## Third-party microphones

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

Install the redistributables on the VMware virtual desktop where your application 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. Nuance does not 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.

## Configuring device splitting

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

1. Start VMware Horizon Client and connect to the virtual desktop you want to use.
2. Install vdm\_agent.adm in the Group Policy Editor of the virtual desktop; the file is located on the Connection Server at C:\Program Files\VMware\VMware View\Server\extras\GroupPolicyFiles. For more information on how to install ADM files, see: <https://technet.microsoft.com/en-us/library/cc739134.aspx>.
3. In the Group Policy Editor, browse for Computer Configuration/Administrative Templates/Classic Administrative Templates (ADM)/VMware View Agent Configuration/View USB Configuration and double-click **Include Vid/Pid Device**.
4. Enable this setting and enter the [device-specific string](#).
5. Browse for Computer Configuration/Administrative Templates/Classic Administrative Templates (ADM)/VMware View Agent Configuration/View USB Configuration/Client Downloadable only Settings and double-click **Split Vid/Pid Device**.
6. Enable this setting and enter the [device-specific string](#).
7. In the Device Manager of the virtual desktop, select **Sound, video and game controllers** and make sure that **VMware Virtual Audio (DevTap)** and **VMware Virtual Microphone** are enabled.
8. Disconnect from the virtual desktop and close VMware Horizon Client.
9. Connect the microphone/control device to the client end point.
10. Start VMware Horizon Client and connect to the virtual desktop.
11. On the VMware Horizon Client menu bar, click **Connect USB Device**, then select **Autoconnect USB Devices** or connect individual devices from the list.

## Device-specific strings

Enter strings for specific devices in the **Include Vid/Pid Device** and **Split Vid/Pid Device** settings.

For more information, see the VMware Knowledge Base:

<http://kb.vmware.com/selfservice/microsites/search.do?cmd=displayKC&externalId=2068447>

Microphone	Device-specific strings
Grundig Digta SonicMic II	Include Vid/Pid Device: o:vid-15d8_pid-0025 Split Vid/Pid Device: o:vid-15d8_pid-0025 (exintf:00;exintf:01;exintf:02;exintf:04;exintf:05)
Grundig Digta SonicMic II (US edition)	Include Vid/Pid Device: o:vid-15d8_pid-0026 Split Vid/Pid Device: o:vid-15d8_pid-0026 (exintf:00;exintf:01;exintf:02;exintf:04;exintf:05)
Grundig Digta SonicMic 3	Include Vid/Pid Device: o:vid-15d8_pid-002a Split Vid/Pid Device: o:vid-15d8_pid-002a (exintf:00;exintf:01;exintf:02;exintf:04)

Nuance PowerMic II and III	Include Vid/Pid Device: o:vid-0554_pid-1001 Split Vid/Pid Device: o:vid-0554_pid-1001 (exintf:00;exintf:01;exintf:02)
Nuance PowerMic II with barcode scanner	Include Vid/Pid Device: o:vid-0554_pid-1002 Split Vid/Pid Device: o:vid-0554_pid-1002 (exintf:00;exintf:01;exintf:02)
Olympus DirectRec DR-2300	Include Vid/Pid Device: o:vid-07b4_pid-0256 Split Vid/Pid Device: o:vid-07b4_pid-0256 (exintf:01;exintf:02;exintf:03;exintf:04;exintf:05;exintf:06)
Philips SpeechMike Premium	Include Vid/Pid Device: o:vid-0911_pid-0c1c Split Vid/Pid Device: o:vid-0911_pid-0c1c (exintf:00;exintf:01;exintf:02;exintf:03)
Philips SpeechMike II	Include Vid/Pid Device: o:vid-0911_pid-0c1c Split Vid/Pid Device: o:vid-0911_pid-0c1c (exintf:00;exintf:01;exintf:02;exintf:03)
Philips SpeechMike II with barcode scanner	Include Vid/Pid Device: o:vid-0911_pid-14a4 Split Vid/Pid Device: o:vid-0911_pid-14a4 (exintf:00;exintf:01;exintf:02;exintf:03)
Philips SpeechMike III	Include Vid/Pid Device: o:vid-0911_pid-0c1c Split Vid/Pid Device: o:vid-0911_pid-0c1c (exintf:00;exintf:01;exintf:02;exintf:03)
<b>Foot control</b>	<b>Device-specific string</b>
Grundig Digta Foot Control 540 USB	Include Vid/Pid Device: o:vid-15d8_pid-0024
Olympus Footswitch RS28	Include Vid/Pid Device: o:vid-07b4_pid-0218
Olympus Footswitch RS31	Include Vid/Pid Device: o:vid-07b4_pid-025f
Philips Foot Control FSW2320/00	Include Vid/Pid Device: o:vid-0911_pid-1844
Philips Foot Control FSW2330/00	Include Vid/Pid Device: o:vid-0911_pid-091a

To configure more than one device in one string, use a semicolon as a separator. For example, to configure a Nuance PowerMic II with barcode scanner and a Nuance PowerMic II, enter the following:

```
Include Vid/Pid Device: o:vid-0554_pid-1002;vid-0554_pid-1001
Split Vid/Pid Device: o:vid-0554_pid-1002(exintf:00;exintf:01;exintf:02);vid-0554_pid-1001(exintf:00;exintf:01;exintf:02)
```

## Configuring USB redirection

To configure USB redirection from the client end point to a VMware virtual desktop, do the following:

1. Start VMware Horizon Client and connect to the virtual desktop you want to use.
2. Install vdm\_agent.adm in the Group Policy Editor of the virtual desktop; the file is located on the Connection Server at C:\Program Files\VMware\VMware View\Server\extras\GroupPolicyFiles. For more information on how to install ADM files, see: <https://technet.microsoft.com/en-us/library/cc739134.aspx>.
3. In the Group Policy Editor, browse for Computer Configuration/Administrative Templates/Classic Administrative Templates (ADM)/VMware View Agent Configuration/View USB Configuration and double-click **Include Vid/Pid Device**.
4. Enable this setting and enter the [device-specific string](#).
5. Disconnect from the virtual desktop and close VMware Horizon Client.
6. Connect the microphone/control device to the client end point.
7. Start VMware Horizon Client and connect to the virtual desktop.
8. On the VMware Horizon Client menu bar, click **Connect USB Device**, then select **Autoconnect USB Devices** or connect individual devices from the list.

# Troubleshooting audio

See also: [Enabling logging](#) and [Contacting support](#).

## Common issues

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In case of problems, check the following:

- The client component of the Nuance VMware Audio Extension is correctly installed. For more information, see: [Verifying the installation](#).
- USB redirection is disabled.  
You cannot use USB redirection together with the Nuance VMware 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 VMware built-in virtual channel together with the Nuance VMware 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 application hosted on the server. For more information, see: [Microphone unavailable](#).

## Verifying the installation

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In case of problems, do the following:

To verify that the Nuance VMware 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 click **Programs and Features**.
2. Check that **Nuance VMware Client Audio Extension** is listed.  
**Note:** If the user was logged on to the client end point or the VMware session (vmware-remotekms.exe process) was running during the installation, the extension might be listed in **Programs and Features** but not work properly. For more information, see: [Microphone unavailable](#).
3. Check that the version number corresponds to your download and to the version number installed on the virtual desktop.
4. Go to C:\Windows\System32 (64-bit Windows) and check that the following files exist:  
NcaAudioDev.dll  
PspLog.dll  
PspMixerWtsClnt.dll  
pspsbext.dll  
PspSbExtWtsClnt.dll
5. Go to C:\Windows\SysWOW64 (32-bit VMware Horizon Client app) and check that the following files exist:  
NcaAudiodev.dll  
PspLog.dll  
PspMixerWtsClnt.dll  
pspsbext.dll  
PspSbExtWtsClnt.dll
6. Open the Registry Editor.

7. On a 64-bit Windows system, browse for HKEY\_CURRENT\_USER\Software\Microsoft\Terminal Server Client\Default\AddIns\PspMixVMW and check the following:
  - The Name value points to C:\windows\System32\PspmixerwtscInt.dll.
  - The PCoIP Enabled DWORD value is set to 1.
8. On a 64-bit Windows system, browse for HKEY\_CURRENT\_USER\Software\Microsoft\Terminal Server Client\Default\AddIns\PspSbExVMW and check the following:
  - The Name value points to C:\windows\System32\PspsbextwtscInt.dll.
  - The PCoIP Enabled DWORD value is set to 1.

## VMware client does not start

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- After you install the Nuance VMware Client Audio Extension, the VMware client does not start.  
Make sure the Nuance VMware Audio Extension is correctly installed; for more information, see: [Verifying the installation](#).

## Microphone unavailable

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- The audio device is not listed by the speech recognition application.  
If a user was logged on to the client end point when you installed the Nuance VMware Client Audio Extension, do the following:
  1. Make sure no user is logged on to the client end point and run Nuance VMware Client Audio Extension.exe again.
  2. Manually add the registry keys to the user logged on to the client end point; for more information, see: [Verifying the installation](#).
- The audio device is not available to the speech recognition application. 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 Nuance VMware Audio Extension is correctly installed; for more information, see: [Verifying the installation](#).
- Your speech recognition application lists 'VMware Virtual Audio (DevTap)' or 'Remote Audio Device' as an audio device, or the device name contains 'Microphone Array' and 'VDI'.  
The Nuance VMware Client Audio Extension is not installed or it was incorrectly installed; for more information, see: [Verifying the installation](#).
- Your speech recognition application lists an audio device from the VMware server, not the client end point.  
The Nuance VMware Client Audio Extension is not installed or it was incorrectly installed; for more information, see: [Verifying the installation](#).
- Your speech recognition application lists an audio device, but not the one you want to use.  
The Nuance VMware 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 click **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 not working

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- Recording and playing back audio work at first, but a failure occurs during record or playback.  
See: [Application performance and stability issues](#).
- Recording and playing back audio do not 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 Nuance VMware Audio Extension is correctly installed; for more information, see: [Verifying the installation](#).
- Recording and playing back audio do not work, even though the audio device appears available to your speech recognition application.  
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 click **Sound**.
  3. Open the **Recording** tab.

If the device is not listed, you have USB redirection enabled and the device is redirected to the VMware server (bypassing the Nuance VMware Audio Extension). To use the device with the Nuance VMware Audio Extension, disable USB redirection.
- Recording does not start; a **Device in use** error is displayed.  
The audio device is in use by another process.  
Make sure that other processes are not using the recording device when you start to record.
- Half-duplex devices (e.g. Philips SpeechMike with firmware lower than version 1.25): Recording does not start; a **Device in use** error is displayed.  
Another application might be playing audio.  
Upgrade the device firmware, and/or ensure that different devices are selected as default devices for recording and playing back audio.
- Nuance PowerMic: Recording or playing back audio does not work, but the LED on the device comes on when you try to record.  
There is an audio problem; proceed as follows:
  1. Make sure your system fulfills the [Requirements](#).
  2. Make sure the Nuance VMware Audio Extension is correctly installed; for more information, see: [Verifying the installation](#).
- Recording and playing back audio work via the application GUI but not via the buttons on the device.  
USB device splitting is not correctly configured. See [Control devices](#).

## Application performance and stability issues

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- Your speech recognition application 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 applications are not prioritized as much.

- Your speech recognition application 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](#).

- Your speech recognition application 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 application (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.

## Enabling logging

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### Nuance VMware Client Audio Extension

1. On the client end point, browse for the C:\Windows\System32 folder.
2. Open PspMixerWtsClnt.ini and PspSbExtWtsClnt.ini in a text editor.
3. In both files, change the Enable line to: Enable=yes
4. In both files, change the File line to define an output folder and file name for logs. You must have write access to this folder.

### Speech recognition application

Applications based on SpeechMagic SDK or the SmAudio SDK from Capture Services:

1. Open the SpeechMagic.AudioFull or SpeechMagic.AudioMinimum folder of your application.
2. Rename smxlog.ini.template to smxlog.ini.
3. Open smxlog.ini and change the LogDirectory line to define an output folder for logs. You must have write access to this folder. The default folder is: C:\TEMP\SpeechMagic\SMXLOG

## Contacting support

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

- The troubleshooting steps you have already carried out and your results.
- Detailed steps describing how to reproduce the problem.
- The version number of the Nuance VMware Client Audio Extension.
- The audio devices used.
- The type and operating system versions of thin clients used.
- The VMware Horizon View version used on your system.
- The VMware client version used.
- The VMware server operating system.
- The guest operating system on the virtual machine.

# Troubleshooting PowerMic controls

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

See also: [Enabling logging](#) and [Contacting support](#).

## Common issues

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In case of problems, check the following:

- The Nuance PowerMic VMware Client Extension is correctly installed. For more information, see: [Verifying the installation](#).
- USB redirection is disabled:  
You cannot use USB redirection together with the Nuance PowerMic VMware 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

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

1. On the client end point, open the Control Panel and click **Programs and Features**.
2. Check that **Nuance PowerMic VMware Client Extension** is listed.  
**Note:** If the VMware session (vmware-remotekms.exe process) was running during the installation of the Nuance PowerMic VMware Client Extension, the extension might not work properly.
3. On a 64-bit Microsoft Windows system, go to C:\Windows\System32 and check that the following files exist:  
PowerMicClient.dll  
PowerMicLog.dll  
PowerMicRDSCInt.dll
4. On a 32-bit VMware Horizon Client app, go to C:\Windows\SysWOW64 and check that the following files exist:  
PowerMicClient.dll  
PowerMicLog.dll  
PowerMicRDSCInt.dll
5. On a 32-bit VMware Horizon Client app, go to C:\Program Files (x86)\Common Files\Nuance\PowerMic and check that the following files exist:  
PowerMicHid.dll  
PowerMicLog.dll
6. On a 64-bit Microsoft Windows system, go to C:\Program Files\Common Files\Nuance\PowerMic (64-bit dll files) and check that the following files exist:  
PowerMicHid.dll  
PowerMicLog.dll
7. Open the Registry Editor.
8. On a 64-bit Microsoft Windows system, browse for HKEY\_LOCAL\_MACHINE\Software\Microsoft\Terminal Server Client\Default\AddIns\PMVMWCL and check the following:

The Name value points to C:\windows\system32\PowerMicRDSCInt.dll.

The PCoIP Enabled DWORD value is set to 1.

9. On a 32-bit VMware Horizon Client app installed on a 64-bit Microsoft Windows system, browse for HKEY\_LOCAL\_MACHINE\Software\Wow6432Node\Microsoft\Terminal Server Client\Default\AddIns\PMVMWCL and check the following:

The Name value points to C:\windows\syswow64\PowerMicRDSCInt.dll.

The PCoIP Enabled DWORD value is set to 1.

## Enabling logging

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To enable logging, do the following:

1. Open the Log folder of the PowerMic SDK.
2. Rename powermiclog.ini.template to: powermiclog.ini
3. Copy powermiclog.ini to the following folders:
  - On the VMware server/virtual desktop where your application is hosted:  
    <ApplicationFolder>\Nuance.PowerMic
  - On the client end point:  
    C:\Program Files (x86)\Common Files\Nuance\PowerMic (for 32-bit VMware Horizon Client app)  
    C:\Program Files\Common Files\Nuance\PowerMic (for 64-bit VMware Horizon Client app)  
    C:\Windows\SysWOW64 (for 32-bit VMware Horizon Client app)  
    C:\Windows\System32 (for 64-bit VMware Horizon Client app)
4. The default log output is C:\temp. To change this, open powermiclog.ini in a text editor and change the LogDirectory value.

## Contacting support

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

- The troubleshooting steps you have already carried out and your results.
- Detailed steps describing how to reproduce the problem.
- The version number of the Nuance PowerMic VMware Client Extension.
- The type and operating system versions of thin clients used.
- The VMware Horizon View version used on your system.
- The VMware client version used.
- The VMware server operating system.
- The guest operating system on the virtual machine.