

# Double Hop Configuration for Citrix Environments

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## Overview

In a Citrix environment, the speech recognition/dictation application can be hosted on a XenApp server and delivered to a Citrix/VMware virtual desktop, which is then streamed to the client end point.

A double hop configuration consists of the following:

- Client end point: Windows end point or thin client.
- First hop: Citrix/VMware virtual desktop or Citrix server.
- Second hop: The Citrix XenApp server where the speech recognition/dictation application is hosted.

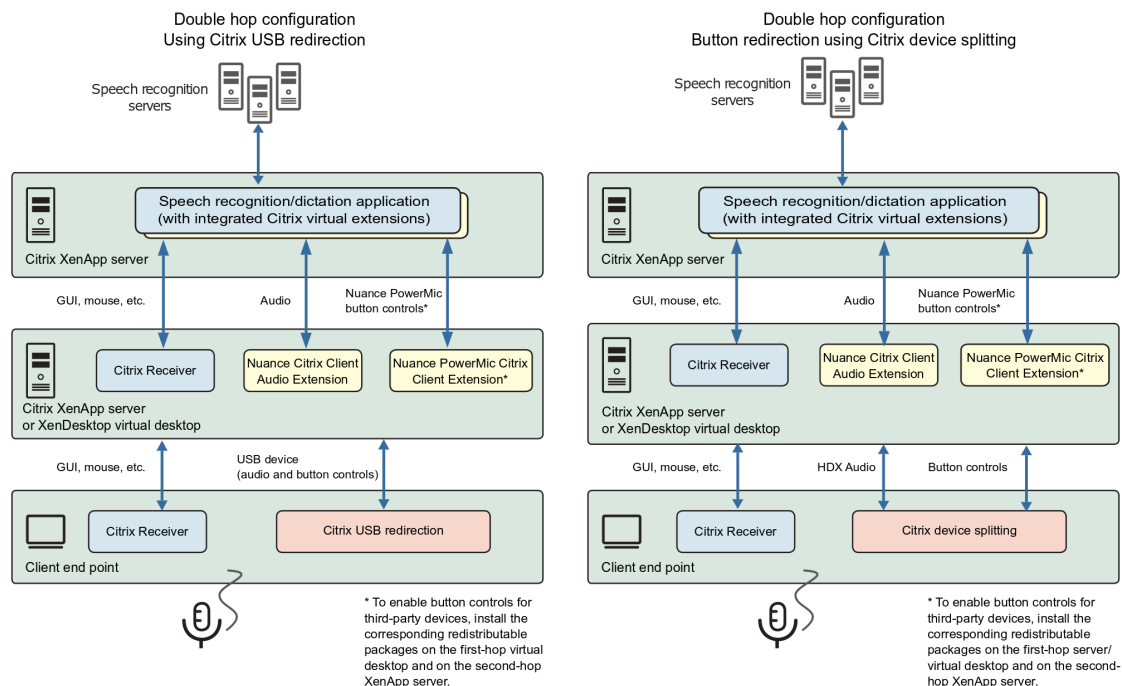
### Client end point - Citrix virtual desktop (first hop) - Citrix XenApp (second hop)

One of the following options for the first hop:

- Use Citrix USB redirection from the client end point to the Citrix XenDesktop virtual desktop.
- Use HDX Audio (high quality) and USB device splitting from the client end point to the Citrix XenDesktop/Citrix XenApp.

To deliver audio data from the virtual desktop (XenDesktop/XenApp) to the XenApp server where the application is hosted (second hop), use the Nuance Citrix Client Audio Extension.

To deliver PowerMic button controls from the virtual desktop (XenDesktop/XenApp) to the XenApp server where the application is hosted (second hop), use the Nuance PowerMic Citrix Client Extension.

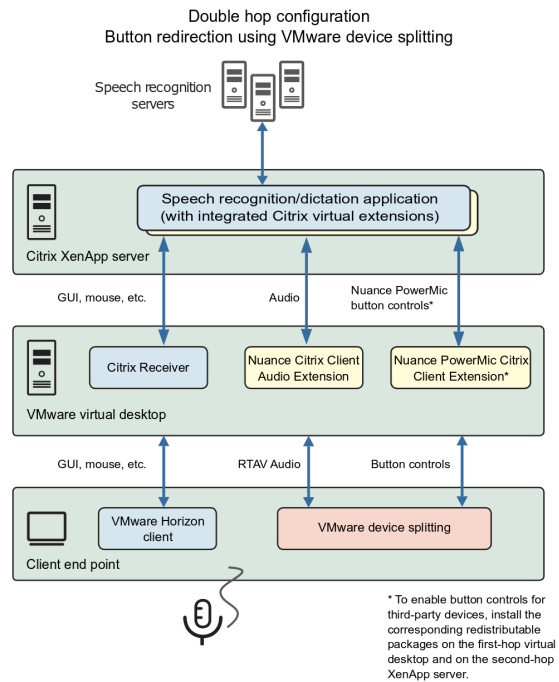
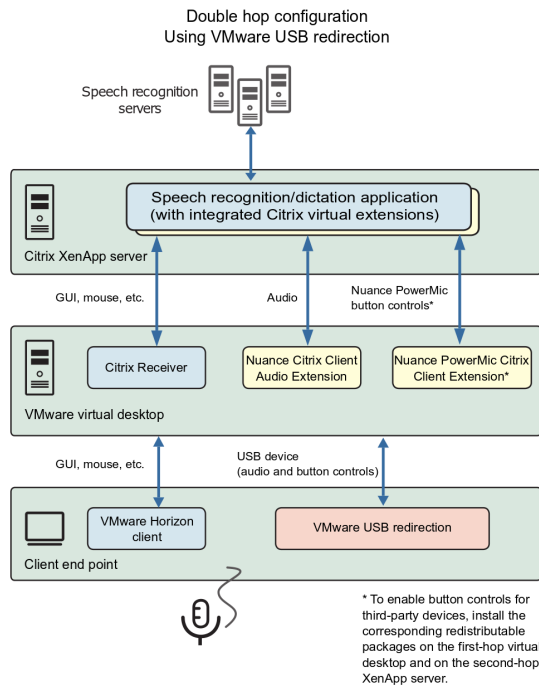


### Client end point - VMware virtual desktop (first hop) - Citrix XenApp (second hop)

Use either USB redirection or RTAV Audio (high quality) and USB device splitting from the client end point to the VMware virtual desktop (first hop).

To deliver audio data from the virtual desktop to the XenApp server where the application is hosted (second hop), use the Nuance Citrix Client Audio Extension.

To deliver PowerMic button controls from the virtual desktop to the XenApp server where the application is hosted (second hop), use the Nuance PowerMic Citrix Client Extension.



# Requirements

## Citrix XenApp server

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- Citrix XenApp 7.15 or higher
- Citrix Virtual Apps 1808 or higher
- One of 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

## Virtual desktop

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- One of the following desktop virtualization systems:
  - Citrix XenDesktop 7.15 or higher
  - Citrix XenApp 7.15 or higher
  - Citrix Virtual Apps and Desktops 1808 or higher
  - VMware Horizon View 7.6 or higher
- One of the following guest operating systems:
  - Windows 8.1
  - Windows 10
  - Windows Server 2012 R2
  - Windows Server 2016
- Citrix Receiver 4.10.1 or higher
- Nuance Citrix Client Audio Extension
- For Nuance PowerMic: Nuance PowerMic Citrix Client Extension

## Client device

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- USB microphone. Depending on your system, USB 3.0 ports might not be supported.
- For more information on the USB redirection requirements for specific virtualization platforms, see the documentation delivered with your product.

## Network requirements

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### First hop: Client end point to Citrix virtual desktop

- Minimum bandwidth for Citrix USB redirection: 400 - 500 kbps
- Minimum bandwidth for HDX Audio and device splitting: 150 - 200 kbps

### First hop: Client end point to VMware virtual desktop

- Minimum bandwidth for VMware USB redirection: 1.2 MBbps
- Minimum bandwidth for RTAV Audio and device splitting: 200 kbps or higher

## Second hop: Citrix/VMware virtual desktop to Citrix XenApp server (Nuance Citrix Client Audio Extension)

- Minimum bandwidth: Approximately 30 kbps
  - CELP: 19.2 kbps
  - Speex: 28 kbps
  - PCM 8 kHz: 128 kbps
  - PCM 16 kHz: 256 kbps
- Network latency must not exceed 50 ms.

# Procedures

## Procedure - USB redirection

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To configure double hop with Citrix XenApp server (second hop) and Citrix/VMware virtual desktop (first hop), do the following:

1. Make sure your system fulfills the [requirements](#).
2. Configure the client end point and first hop:

For Citrix XenDesktop virtual desktops: [Configure USB redirection](#) in Citrix Studio and on the client end point.

For Citrix XenApp server (for example, if you use a server operating system such as Microsoft Windows Server as a virtual desktop): [Configure USB redirection](#) in Citrix Studio and on the client end point.

For VMware virtual desktops: [Configure USB redirection](#) on the virtual desktop.

[Install the Nuance Citrix Client Audio Extension](#) on the virtual desktop.

For Nuance PowerMic: [Install the Nuance PowerMic Citrix Client Extension](#) on the virtual desktop.

## Procedure - button redirection using device splitting

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To configure double hop with Citrix XenApp (second hop) and Citrix/VMware virtual desktop (first hop), do the following:

1. Make sure your system fulfills the [requirements](#).
2. Configure the client end point and first hop:

For Citrix XenDesktop virtual desktop: [Configure button redirection using device splitting](#) and then [install the Nuance Citrix Client Audio Extension](#) on the virtual desktop where the device splitting is configured.

For Citrix XenApp server: [Configure button redirection using device splitting](#) and then [install the Nuance Citrix Client Audio Extension](#) on the XenApp server where the device splitting is configured.

For VMware virtual desktop: [Configure button redirection using device splitting](#) and then [install the Nuance Citrix Client Audio Extension](#) on the virtual desktop where the device splitting is configured.

For Nuance PowerMic: Install the Nuance PowerMic Citrix Client Extension [on the virtual desktop](#) or [XenApp server](#) where the device splitting is configured.

## USB redirection - Citrix XenDesktop

To enable USB redirection from the client end point to a XenDesktop 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. Enable USB redirection [on the client end point and virtual desktop](#).

### Creating a USB redirection policy

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Proceed as follows:

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

### Configuring the client end point and virtual desktop

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

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

1. Make sure the audio device is connected and switched on.
2. Create a new registry setting (PowerMic II example):  
    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. Start Citrix Receiver and connect to the virtual desktop.
4. In the desktop viewer toolbar, click **Preferences**.
5. Open the **Connections** tab.
6. Under **Microphones and Webcams, Session Settings**, select **Connect automatically**.
7. Disconnect from the virtual desktop, restart Citrix Receiver, and reconnect to the virtual desktop.
8. In the desktop viewer toolbar, click **Preferences**.



9. Open the **Devices** tab.
10. Enable the microphone you want to use. The device drivers are installed on the virtual desktop.
11. In the desktop viewer toolbar, select **Devices** and make sure the device you want to use is listed.

## Device IDs

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

Microphone	ID
Nuance PowerMic II	VID0554 PID1001
Nuance PowerMic III	VID0554 PID1001
Nuance PowerMic II with barcode scanner	VID0554 PID1002
Philips SpeechMike Air	VID0911 PID0BB8
Philips SpeechMike Premium	VID0911 PID0C1C
Philips SpeechMike II	VID0911 PID149A
Philips SpeechMike II with barcode scanner	VID0911 PID14A4
Philips SpeechMike III	VID0911 PID0C1C
Foot control	ID
VEC foot controls	VID05F3 PID00FF
Philips Foot Control FSW2320	VID0911 PID0910
Philips Foot Control FSW2330	VID0911 PID091A

## USB redirection - Citrix XenApp

To enable USB redirection from the client end point to a XenApp server (for example, if you use a server operating system such as 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. Enable USB redirection [on the client end point and XenApp server](#).

### Creating a USB redirection policy

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Proceed as follows:

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

### Configuring the client end point and XenApp server

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

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

1. 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 Receiver Workspace\User experience and double-click **Audio through Generic USB Redirection**. Enable this setting.
5. Start Citrix Receiver/Workspace and connect to the XenApp server.
6. Start your application and click the message displayed in the notification area; a dialog box opens.
7. Select the device you want to use and click **Connect**.
8. Right-click the Citrix Receiver/Workspace icon in the notification area and open **Citrix Connection Center**.
9. In the **Citrix Connection Center** dialog box, click **Preferences**.
10. Open the **Devices** tab to make sure the device you want to use is listed.
11. Click **Switch to generic** (if this option is displayed in the **Virtual Channel** column) to make sure the device is redirected to the XenApp server. The device drivers are installed on the XenApp 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 XenApp server, restart Citrix Receiver/Workspace and reconnect to the XenApp 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:

Microphone	ID
Nuance PowerMic II	VID0554 PID1001
Nuance PowerMic III	VID0554 PID1001
Nuance PowerMic II with barcode scanner	VID0554 PID1002
Philips SpeechMike Air	VID0911 PID0BB8
Philips SpeechMike Premium	VID0911 PID0C1C
Philips SpeechMike II	VID0911 PID149A
Philips SpeechMike II with barcode scanner	VID0911 PID14A4
Philips SpeechMike III	VID0911 PID0C1C
Foot control	ID
VEC foot controls	VID05F3 PID00FF
Philips Foot Control FSW2320	VID0911 PID0910
Philips Foot Control FSW2330	VID0911 PID091A

## USB redirection - VMware Horizon View

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.

### Device-specific strings

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The following strings are entered when creating a group policy:

Microphone	Device-specific string
Nuance PowerMic II and III	o:vid-0554_pid-1001
Nuance PowerMic II with barcode scanner	o:vid-0554_pid-1002
Philips SpeechMike Premium	o:vid-0911_pid-0c1c
Philips SpeechMike II	o:vid-0911_pid-0c1c
Philips SpeechMike II with barcode scanner	o:vid-0911_pid-14a4
Philips SpeechMike III	o:vid-0911_pid-0c1c
Foot control	Device-specific string
Philips Foot Control FSW2320/00	o:vid-0911_pid-1844
Philips Foot Control FSW2330/00	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:

```
o:vid-0554_pid-1002;vid-0554_pid-1001
```

## Configuring button redirection using device splitting - Citrix XenDesktop

To configure button redirection using device splitting from the client end point to a Citrix XenDesktop virtual desktop, do the following:

1. Configure USB redirection on the virtual desktop (for more information, see [USB redirection - Citrix XenDesktop](#)).
2. [Configure button redirection using device splitting](#) on the client end point.

### Configuring button redirection using device splitting - client end point

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To configure button redirection using device splitting on the client end point, do the following:

1. Copy the `CitrixBase.admx` and `receiver.admx` files from `C:\Program Files (x86)\Citrix\ICA Client\Configuration` to `%systemroot%\PolicyDefinitions` and the `CitrixBase.adml` and `receiver.adml` files from `C:\Program Files (x86)\Citrix\ICA Client\Configuration\en-US` to `%systemroot%\PolicyDefinitions\en-US`.
2. In the Group Policy Editor of the client end point, browse for `Computer Configuration\Administrative Templates\Citrix Components\Citrix Receiver\Remoting Client Devices\Generic USB Remoting` and double-click **SplitDevices**. Enable this setting.
3. Connect the microphone/control device to the client end point.
4. Connect to the Citrix server and start your application.
5. In the desktop viewer toolbar, click **Devices**, select the device you want to use and click **HID device**.

**Note:** For the buttons to work, you must select the **HID device** every time you start a session.

# Configuring button redirection using device splitting - Citrix XenApp

To configure button redirection using device splitting from the client end point to a XenApp server, do the following:

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

## Creating a USB redirection policy

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Proceed as follows:

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

### Remark

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 the client end point

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### Configuring the client end point and XenApp server

To configure button redirection for Microsoft Windows clients, do the following:

1. Make sure the audio device is connected and switched on.
2. Create a new registry setting (PowerMic II example):  
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. Start Citrix Receiver and connect to the XenApp server
4. In the **Connection Center** dialog box, click **Preferences**.
5. Open the **Connections** tab.
6. Under **Microphones and Webcams, Session Settings**, select **Connect automatically**.
7. Disconnect from the XenApp server, restart Citrix Receiver, and reconnect to the XenApp server.
8. In the **Connection Center** dialog box, click **Preferences**.
9. Open the **Devices** tab.
10. Enable the microphone you want to use. The device drivers are installed on the XenApp server.
11. In the **Connection Center** dialog box, select **Devices** and make sure the device you want to use is listed.

## Configuring button redirection using device splitting - client end point

To configure button redirection using device splitting on the client end point, do the following:

1. Copy the CitrixBase.admx and receiver.admx files from C:\Program Files (x86)\Citrix\ICA Client\Configuration to %systemroot%\PolicyDefinitions and the CitrixBase.adml and receiver.adml files from C:\Program Files (x86)\Citrix\ICA Client\Configuration\en-US to %systemroot%\PolicyDefinitions\en-US.
2. In the Group Policy Editor of the client end point, browse for Computer Configuration\Administrative Templates\Citrix Components\Citrix Receiver\Remoting Client Devices\Generic USB Remoting and double-click **SplitDevices**. Enable this setting.
3. Connect the microphone/control device to the client end point.
4. Connect to the Citrix server and start your application.
5. In the **Connection Center** dialog box, click **Devices**, select the device you want to use and click **HID device**.

**Note:** For the buttons to work, you must select the **HID device** every time you start a session.

## Device IDs

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

Microphone	ID
Nuance PowerMic II	VID0554 PID1001
Nuance PowerMic III	VID0554 PID1001
Nuance PowerMic II with barcode scanner	VID0554 PID1002
Philips SpeechMike Air	VID0911 PID0BB8
Philips SpeechMike Premium	VID0911 PID0C1C
Philips SpeechMike II	VID0911 PID149A
Philips SpeechMike II with barcode scanner	VID0911 PID14A4
Philips SpeechMike III	VID0911 PID0C1C
Foot control	ID
VEC foot controls	VID05F3 PID00FF
Philips Foot Control FSW2320	VID0911 PID0910
Philips Foot Control FSW2330	VID0911 PID091A



## Configuring button redirection using device splitting - VMware virtual desktop

To configure button redirection using 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**. Enable this setting and enter the [device-specific string](#).
6. 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.
7. Disconnect from the virtual desktop and close VMware Horizon Client.
8. Connect the microphone/control device to the client end point.
9. Start VMware Horizon Client and connect to the virtual desktop.
10. 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 string
Nuance PowerMic II and III	o:vid-0554_pid-1001
Nuance PowerMic II with barcode scanner	o:vid-0554_pid-1002
Philips SpeechMike Premium	o:vid-0911_pid-0c1c
Philips SpeechMike II	o:vid-0911_pid-0c1c
Philips SpeechMike II with barcode scanner	o:vid-0911_pid-14a4
Philips SpeechMike III	o:vid-0911_pid-0c1c
Foot control	Device-specific string
Philips Foot Control FSW2320/00	o:vid-0911_pid-1844
Philips Foot Control FSW2330/00	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:

```
o:vid-0554_pid-1002;vid-0554_pid-1001
```

## Nuance audio channel installation

Install the Nuance Citrix Client Audio Extension on the virtual desktop.

**Note:** Make sure that Citrix Receiver 4.10.1 or higher is already installed on the virtual desktop; see: [Requirements](#). Citrix Receiver must not be running during the installation of the Nuance Citrix Client Audio Extension.

Proceed as follows:

1. Log on to the virtual desktop as an administrator.
2. Open the Nuance Citrix Audio and Button Extensions\Client\Client Windows folder and double-click Nuance Citrix Client Audio Extension.exe.
3. Follow the installation wizard.

### Remarks

- If you upgrade the Citrix client, you must reinstall the Nuance Citrix Client Audio Extension.
- Microphone buttons and other controls require a separate channel. For more information on Nuance PowerMic support, see: [PowerMic control channel installation](#).
- For the double hop configuration with two Citrix XenApp servers: install the Nuance Citrix Client Audio Extension via the command line (using the SKIP\_OSCHECK=1 parameter) on the first-hop XenApp server where the device splitting is configured.

## PowerMic control channel installation

Install the Nuance PowerMic Citrix Client Extension on the virtual desktop.

**Note:** Make sure that Citrix Receiver 4.10.1 or higher is already installed on the virtual desktop; see: [Requirements](#). Citrix Receiver must not be running during the installation of the Nuance PowerMic Citrix Client Extension.

Proceed as follows:

1. Log on to the virtual desktop as an administrator.
2. Open the Nuance Citrix Audio and Button Extensions\Client\Client Windows folder and double-click Nuance PowerMic Citrix Client Extension.msi.
3. Follow the installation wizard.

### Remarks

- If you upgrade the Citrix client, you must reinstall the Nuance PowerMic Citrix Client Extension.
- Firmware upgrade is not supported in a Citrix environment.
- In some cases the focus is lost and PowerMic buttons are not recognized if the application is started in the background after a session is reconnected. Press ALT + TAB until the focus is regained.
- For the double hop configuration with two Citrix XenApp servers: install the Nuance PowerMic Citrix Client Extension via the command line (using the SKIP\_OSCHECK=1 parameter) on the first-hop XenApp server where the device splitting is configured.

# Troubleshooting

## Known issues

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Nuance PowerMic II devices connected via Citrix USB redirection: After session reconnect the first **Record** button press is ignored. **Solution:** Upgrade the PowerMic II firmware to version 2.05 or higher.