

CITRIX[®] XenApp

CITRIX[®] XenDesktop

 **Windows**
Remote Desktop Services

 **Microsoft VDI**

 **vmware**
Horizon View

 **Linux**



PHILIPS SPEECH EXTENSION DRIVERS

GENERATION 12.3

Build No. 3.5.350.05

Technical Documentation
Advanced Configuration

For Certified MDC Partners and Support technicians

PHILIPS

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PHILIPS SPEECH EXTENSION DRIVERS	1
1. Important	5
1.1. Objective	5
1.2. Disclaimer and notices.....	5
2. Introduction	6
2.1. What's new?	6
2.2. Feature overview	7
2.3. Supported Windows, Citrix and VMware View platforms.....	8
2.4. Supported Linux platforms	9
2.5. Compatibility overview	9
2.6. Supported hardware	10
2.7. Remote Device Manager	10
2.8. Known issues	11
2.8.1. General	11
2.8.2. IGEL UDX-720	11
2.8.3. eLux: dictation files are not deleted from the DPM after download	12
2.8.4. Igel UD 5 RDP session	13
2.8.5. VMware Horizon View	13
2.8.6. USB 3.0 ports on Linux clients are not supported	13
3. Installation	14
3.1. System architecture.....	14
3.2. Installation on Windows systems	15
3.2.1. Installation on the Windows server / virtual desktop	15
3.2.2. Installation on the Windows client	15
3.2.3. Drivers installation matrix – Microsoft WTS / Remote Desktop Services	17
3.2.4. Drivers installation matrix – Citrix XenApp / XenDesktop.....	17
3.2.5. Drivers installation matrix – VMware Horizon View	18
3.3. Installation on Unicon eLux RP clients	18
3.4. Installation on Ubuntu clients	18
3.5. Installation on Igel Universal Desktop clients	19
3.5.1. Citrix on Igel clients.....	19
3.5.2. Microsoft WTS / Remote Desktop Services on Igel clients	20
3.6. Installation on HP ThinPro clients	21
3.7. Installation on Wyse enhanced SUSE clients	24
3.8. Installation on Stratodesk noTouch clients.....	29
3.8.1. Citrix on Stratodesk noTouch clients	29
3.8.2. Microsoft WTS / Remote Desktop Services on Stratodesk noTouch clients.....	30
4. General configuration on Linux clients.....	31
4.1. DPM drive mapping on Citrix clients	31
4.2. Foot Control button assignment on Linux clients.....	32
4.2.1. Default Foot Control configuration and commands	32
4.2.2. Foot Control configuration file.....	33
4.2.3. Foot Control button assignment on Igel clients	33
5. Windows server / virtual desktop and client driver setup	34
5.1. General information	34
5.2. Installation of the server / virtual desktop drivers	34
5.2.1. Start	34
5.2.2. Citrix selection	35

5.2.3.	Microsoft WTS / Remote Desktop Services selection	36
5.2.4.	VMware Horizon View selection	37
5.2.5.	Finish installation	38
5.3.	Client installation	39
5.3.1.	Start	39
5.3.2.	Citrix	40
5.3.3.	Microsoft WTS / Remote Desktop Services	42
5.3.4.	VMware Horizon View	43
5.3.5.	Finish installation	44
5.4.	Command line installation – silent setup	45
6.	VMware Horizon View settings	46
6.1.	Scenario 1: Digital Pocket Memo	46
6.2.	Scenario 2: SpeechMike / Foot Control	46
6.3.	Scenario 3: SpechMike / Foot Control AND Digital Pocket Memo	46
6.4.	VMware View USB configuration	50
7.	Trouble shooting Linux	51
8.	Trouble shooting Windows	53
9.	Appendix	55
9.1.	Installation Desktop Experience	55
9.1.1.	Microsoft Windows Server 2012R2	55
9.1.2.	Microsoft Windows Server 2008R2	60

1. Important

1.1. Objective

This document describes the installation of the Philips Speech Extension Drivers for the usage with

- Microsoft Windows Terminal Services / Remote Desktop Services
- Citrix XenApp / XenDesktop
- VMware Horizon View

1.2. Disclaimer and notices

Speech Processing Solutions has carried out extensive testing with most popular configurations. However, since computer add-ons and device drivers change very rapidly, we are unable to guarantee conflict-free operation.

2. Introduction

The Philips Speech drivers provide audio and control support for Philips applications and integrations on Windows and Linux client platforms in remote desktop environments. Control support is provided for Philips SpeechMike II, SpeechMike III, SpeechMike Premium and SpeechMike AIR, Foot Control, Digital Pocket Memo 8000, 9500 and 9600 series.

IMPORTANT: This version of the Philips Speech drivers is **not compatible** with the G5 Windows and Linux client drivers. It is possible to upgrade the Windows client drivers from G5 (v3.2.320.40) to G12.3 incrementally, so if you want to upgrade from drivers G5 to G12.3, please perform the following steps **before** you upgrade the server software and drivers:

- 1) Upgrade the extension drivers on the **Windows clients** to G12.3 (Windows client extensions G12.3 are compatible with Windows server extensions G5)
- 2) After you are done with the upgrade of the Windows clients, upgrade all **Linux based thin clients** **and** install the **MSI patches** and the **G12.3 server extensions** on the server (this has to be done simultaneously as the G5 Linux extensions are **not** compatible with the new G12.3 drivers).

2.1. What's new?

G12.3 (3.5.350.05):

- Support of new thin client operating systems:
 - HP ThinPro (Citrix)
 - Wyse enhanced SUSE (Citrix)
 - Stratodesk noTouch (Citrix/WTS)
- Support of the Speed/Tone functionality in SpeechExec Player/Recorder on Linux thin clients

G12.2 (3.3.331.09):

- Windows extensions for VMware Horizon View
- Support of the Remote Device Manager in remote environments (Windows + Linux clients)
- Support of RDP 8.1 (UDP and TCP)
- On virtual desktops all required registry entries are now set automatically during the installation process
- Support of the latest Linux client operating systems
 - Igel Universal Desktop (4.13.210 / 5.04.100)
 - Unicon eLux 4.6.0
 - Ubuntu 14.0.4
- Support of XenApp 7.6 and XenDesktop 7.6

G12.1.1 (3.3.330.12):

- Support of feature parameters in the administrative setup (via command line)
- Support of XenDesktop / XenApp 7.5
- Support of the latest thin client operating systems
 - Igel Universal Desktop (4.13.210 / 5.03.190)
 - Unicon eLux 4.5.0
- Fixed G5 compatibility issue on x64 WTS clients
- Citrix server drivers can be installed on virtual desktop operating systems (XenDesktop)

G12.1 (3.2.322.16):

- Support of Windows Server 2012R2
- Support of XenDesktop 7.1
- Compatibility of Windows client drivers G12.1 with server drivers G5 to allow an incremental upgrade from G5 to G12.1
- Server drivers can be installed on virtual desktop operating systems to allow connections to virtual machines running on a Hyper-V server (RDP only)
- Support of the barcode event mode feature
- Support of the Foot Control Wizard on Windows clients
- Minimizing the worklist to the system tray now also works in remote environments
- Linux drivers: bugfix record standby mode

2.2. Feature overview

The following tables are covering the supported functions in remote environments:

Client platform			
SpeechMike III SpeechMike Premium	SpeechMike Air	Digital Pocket Memo	USB Foot Control
Windows			
Buttons	Buttons	Buttons	Buttons
LED	LED	LED	Configuration
Audio	Audio	Audio	
Configuration	Configuration	Configuration	
Firmware Update	Firmware Update	Firmware Update	
		File Handling	

Linux			
Buttons	Buttons	Buttons	Buttons
LED	LED	LED	Configuration *
Audio	Audio	Audio	
Configuration	Configuration	Configuration	
Firmware Update	Firmware Update	Firmware Update	
		File Handling	

* On Linux by editing configuration files. Linux distributions vary from vendor to vendor and it usually requires significant effort to come to a fully working system. This effort cannot be provided by Speech Processing Solutions.

2.3. Supported Windows, Citrix and VMware View platforms

With this version of the Philips Speech driver extensions for WTS/Citrix/VMware View you are able to have environments, which consist of the following components:

Windows Terminal Server

Windows Server 2008R2
Windows Server 2012
Windows Server 2012R2

Citrix

Citrix Presentation Server 4.5
XenApp 5
XenApp 6
XenApp 6.5
XenApp 7.5
XenApp 7.6
XenDesktop 7.5
XenDesktop 7.6

VMware

VMware Horizon View 6.1.0

Virtual Desktops (Microsoft Remote Desktop / Citrix XenDesktop / VMware View)

Windows 7 SP1 (32/64-bit)
Windows 8.1 (32/64-bit)

Clients

Windows 7 SP1 (32/64-bit)
Windows 7 Embedded (Thin client platform)
Windows 8 Embedded (Thin client platform)
Windows 8.1 (32/64-bit)
Linux Clients based on Kernel 2.6.32 or higher
Citrix ICA Client for Windows Desktop or Linux >=12.x
VMware Horizon Client >=3.1.0

Note: non-professional versions of Microsoft Windows (e.g. Windows Home) are NOT supported!

2.4. Supported Linux platforms

The following devices and operating systems were used in Philips internal tests, the compatibility with other devices is assumed based on information from the firmware vendor, for an overview of compatible devices please visit the according firmware vendor websites.

The Linux drivers can be found in the sub folders of **\2_LinuxDrivers**

Hardware	Operating System	Version	Driver Folder	Supported Terminal System	Website
Dell Wyse					
Dell D50D	Wyse enhanced SUSE	11.2.062	\\DellWyse\	Citrix	http://www.dell.com
HP					
HP t520	HP ThinPro	5.1.0	\\HP\		http://www.hp.com
Igel					
UD3-720LX	Igel Universal Desktop	4.14.100 ¹⁾	Full integrated	Citrix/WTS	http://www.igel.com
UD5-740LX	Igel Universal Desktop	5.06.101 ¹⁾	Full integrated	Citrix/WTS	
Stratodesk					
HP t520	noTouch	2.39.385d-TC-k305-150603	Full integrated	Citrix/WTS	http://www.stratodesk.com
Ubuntu					
Desktop PC	Ubuntu	14.04	\\Ubuntu\	Citrix	http://www.ubuntu.com
Unicon					
Futro S550	eLux RP	4.8.0	\\Unicon\	Citrix	http://www.mylux.com

¹⁾ The new G12.3 drivers will be available in Igel UD v4.15.x / v5.07.x and higher

For more Information regarding thin clients contact your thin client supplier or service provider.

2.5. Compatibility overview

The following table shows which versions of SpeechExec Enterprise are compatible with which versions of the remote extension drivers:

SpeechExec Enterprise Version	Extensions Version		
	Server	Win Client	Linux Client
SEE 4.5 (b770.8) or lower	G5	G5 / >=G12.1	G5
SEE 4.5 (b770.8) or lower with MSI patches G12.x	G12.x	G12.x	G12.x
SEE 4.5 SR1 (b773.0) or higher	G12.x	G12.x	G12.x

G5 = b3.2.320.40

G12.x = b3.2.321.01 or higher

G12.1 = b3.3.330.12

2.6. Supported hardware

Device Category	Device Type
Digital Pocket Memo 4	DPM8000
	DPM8200
	DPM8500
Digital Pocket Memo 3	LFH9620
	LFH9600
	LFH9520
	LFH9500
SpeechMike Premium	LFH3610
	LFH3600
	LFH3520
	LFH3510
	LFH3500
SpeechMike 3	LFH3310
	LFH3300
	LFH3220
	LFH3210
	LFH3200
SpeechMike Air	LFH3020
	LFH3010
	LFH3000
Foot Control	LFH2330
	LFH2320
	LFH2310

2.7. Remote Device Manager

Philips extension drivers G12.2 or higher allow to run the Philips Remote Device Manager **updater client** on terminal servers and virtual desktops. For the extension drivers installation instructions see [chapter 3 Installation](#).



2.8. Known issues

2.8.1. General

ID	Description
9139	DPM authors with either small letters (author) or mixed upper and lower case letters (Author) cannot be downloaded automatically in a WTS session. Workaround: please define Authors in the DPM with capital letters only (AUTHOR). That will assure the automatic DPM download in SpeechExec.
	The following functions are not available on any platform: <ul style="list-style-type: none">• Recording notification beep• Recording standby beep• Playback of .wma file format• Playback of .mp3 VBR file format• Changing the preferred playback device for playback through SpeechExec• Some limitations in the SpeechMike configuration wizard

2.8.2. IGEL UDx-720

ID	Description
9137	On an IGEL UD3-720 and UD5-720 device recording in quality play (dication.ds2) does not work. There are indications that the cause for that behavior is in the built in audio mixer of the operating system, which takes too much CPU performance

Note: as only UD3 and UD5 were physically available during release testing it might turn out that other devices face the same issue.

2.8.3. eLux: dictation files are not deleted from the DPM after download

On eLux systems it might happen, that dictation files remain on the DPM device, even if “delete files on the DPM after download is finished” is enabled. The background for this is that on eLux operating systems it takes up to 20 seconds until the files are deleted from a mass storage device. This behavior is eLux specific and beyond the control of our software and drivers.

Work around 1:

Wait about 20 seconds before unplugging the device after the dictation download is finished

Work around 2:

Define a hotkey to sync and unmount the plugged in mass storage devices manually:

- 1) Open **Scout Enterprise** and go to **Advanced settings of device / Advanced file entries**
- 2) Add the following entries:

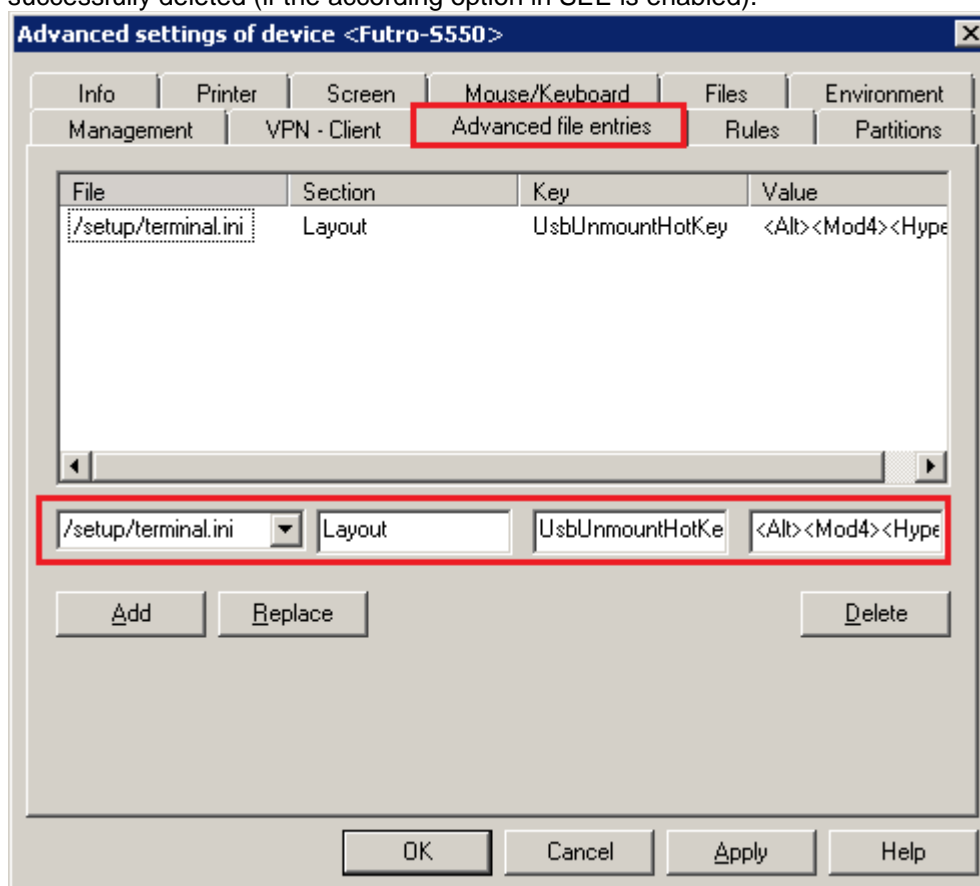
File: /setup/terminal.ini

Section: Layout

Key: UsbUnmountHotKey

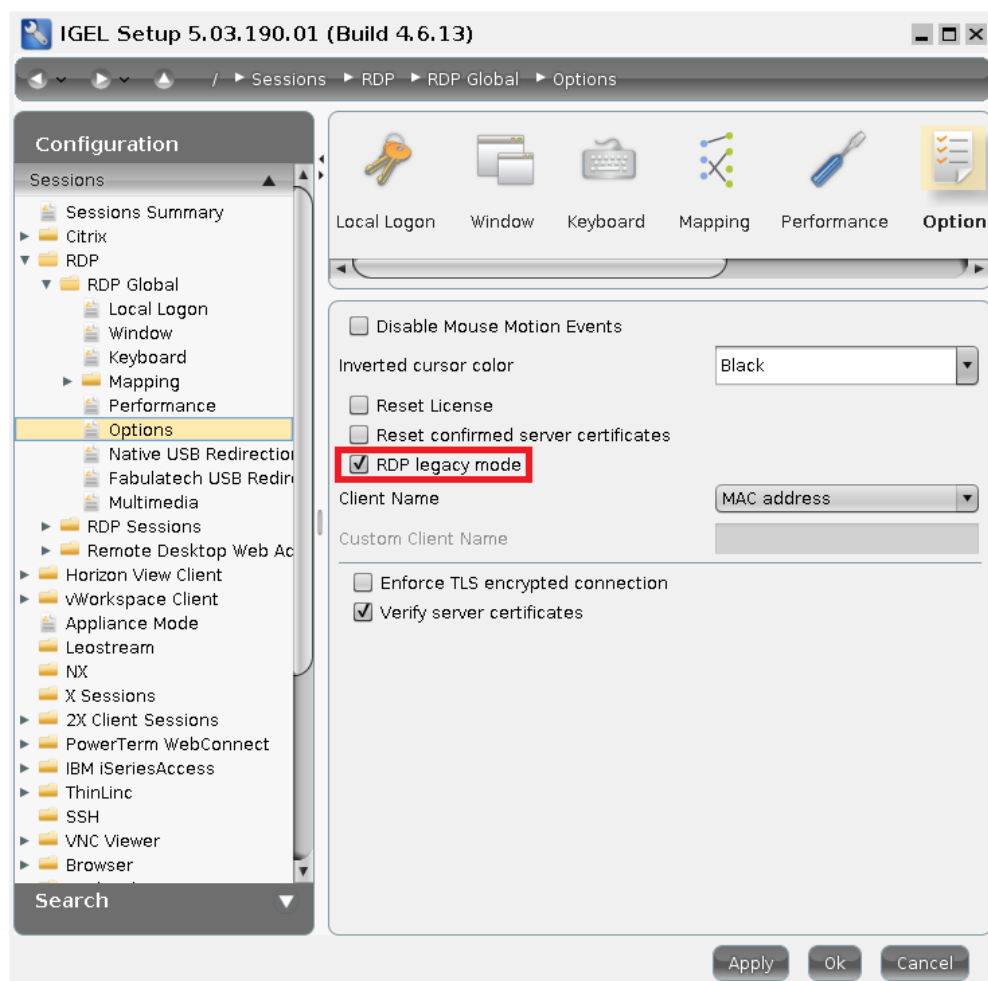
Value: <Alt><Mod4><Hyper>s

In this example, pressing **<Alt>+<Windows>+<s>** on the client would sync and unmount the plugged in mass storage devices, and as a consequence the dictation files would be successfully deleted (if the according option in SEE is enabled).



2.8.4. Igel UD 5 RDP session

When opening an RDP session on an Igel UD 5.x client it might happen, that DPM related functions do not work properly. This problem is related to the Igel RDP client 2.1, to resolve this issue, open the Igel setup, go to **RDP – RDP Global – Options** and enable “RDP legacy mode”.



2.8.5. VMware Horizon View

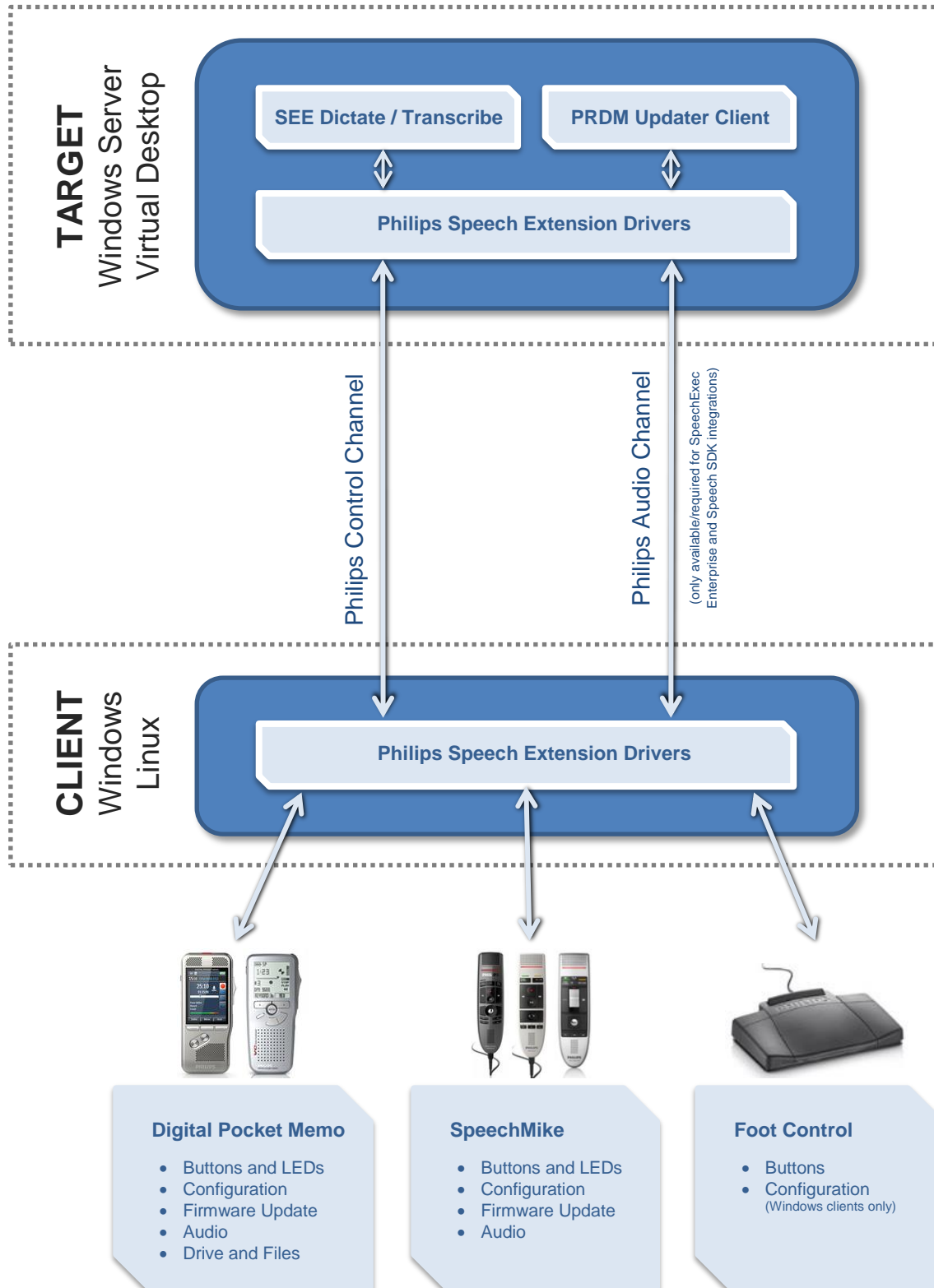
- SpeechMike firmware update is currently not supported in a VMware Horizon View environment.
- As VMware Horizon View does not support the mapping of local drives to the virtual desktop, it is required to map the DPM device using the VMware USB device redirection functionality, for more details see chapter [VMware Horizon View Settings](#).
- Using a Digital Pocket Memo device as a USB microphone is currently not supported in a VMware Horizon View environment.

2.8.6. USB 3.0 ports on Linux clients are not supported

As audio USB devices plugged into USB 3.0 ports on Linux clients can lead to malfunction, USB 3.0 ports are **not supported** on clients where Linux based operating systems are running. Please use USB 2.0 ports for your dictation devices.

3. Installation

3.1. System architecture



3.2. Installation on Windows systems

3.2.1. Installation on the Windows server / virtual desktop

Please remove all older Philips Speech Drivers before installing the new version.

1. Install SpeechExec Enterprise if not installed yet.
2. Install the following components:
 - \1_WindowsDrivers\PhilipsSpeechDriversSetup.exe
 - \3_SpeechExecEnterprise_patch\DPMControl.msi
 - \3_SpeechExecEnterprise_patch\SmExAudio.msi
 - \3_SpeechExecEnterprise_patch\SpMikeCtrl.msi

3.2.1.1. When to use the 32-bit and the 64-bit driver on server / virtual desktop side

It depends on what application you want to use. In case of 32-bit applications (for example, SpeechExec Enterprise or Remote Device Manager Updater Client), the 32-bit driver setup is required, **regardless** of the server / virtual desktop operating system.

The 64-bit driver setup is **solely** used if a 64-bit application is used on the server / virtual desktop (for example, the 64-bit Hardware SDK test app).

3.2.2. Installation on the Windows client

Please remove all older Philips Speech Drivers before installing a new version.

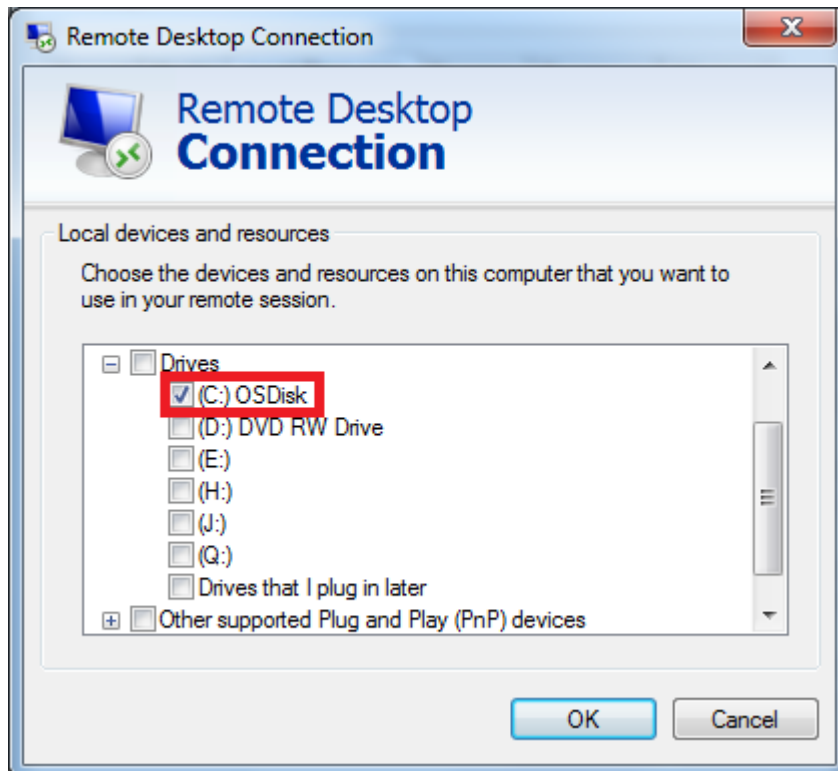
1. If you want to use Citrix please make sure an ICA Client version 12.x or newer is installed **BEFORE** you install the Philips drivers.

Note: if you upgrade or reinstall the ICA Client, you have to reinstall the extension drivers on the client as some relevant registry settings get changed during the ICA Client upgrade/installation process.

2. For Microsoft WTS/RDS on Windows 32-bit clients and Citrix/VMware on Windows 32- or 64-bit clients run \1_WindowsDrivers\PhilipsSpeechDriversSetup.exe with the according parameters.

For Microsoft WTS/RDS on Windows 64-bit clients run
\1_WindowsDrivers\PhilipsSpeechDrivers64Setup.exe with the according parameters.

Note: If you want to use DPM devices in a Microsoft WTS/RDS environment, please ensure that the local client drive “C” is checkmarked in the Remote Desktop Connection settings (Show Options - Local Resources - More...):



3.2.2.1. When to use the 32-bit and the 64-bit driver on client side?

In a Citrix and VMware environment, the 32-bit driver setup is required.

In a Microsoft WTS / Remote Desktop Services environment, the client operating system and the driver setup must be identical; it means that the 32-bit operating system requires a 32-bit setup, similarly, the 64-bit operating system requires a 64-bit setup.

3.2.3. Drivers installation matrix – Microsoft WTS / Remote Desktop Services

MS WTS/RDS	Server / Virtual Desktop x86	Server / Virtual Desktop x64
Installation SpeechExec Enterprise Dictate/Transcribe <i>and/or</i> RDM Updater Client	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe \3_SpeechExecEnterprise_patch\ DPMControl.msi \3_SpeechExecEnterprise_patch\ SmExAudio.msi \3_SpeechExecEnterprise_patch\ SpMikeCtrl.msi	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe \3_SpeechExecEnterprise_patch\ DPMControl.msi \3_SpeechExecEnterprise_patch\ SmExAudio.msi \3_SpeechExecEnterprise_patch\ SpMikeCtrl.msi
Client		
Client x86	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe
Client x64	\1_WindowsDrivers\ PhilipsSpeechDrivers64Setup.exe	\1_WindowsDrivers\ PhilipsSpeechDrivers64Setup.exe

3.2.4. Drivers installation matrix – Citrix XenApp / XenDesktop

Citrix	Server / Virtual Desktop x86	Server / Virtual Desktop x64
Installation SpeechExec Enterprise Dictate/Transcribe <i>and/or</i> RDM Updater Client	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe \3_SpeechExecEnterprise_patch\ DPMControl.msi \3_SpeechExecEnterprise_patch\ SmExAudio.msi \3_SpeechExecEnterprise_patch\ SpMikeCtrl.msi	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe \3_SpeechExecEnterprise_patch\ DPMControl.msi \3_SpeechExecEnterprise_patch\ SmExAudio.msi \3_SpeechExecEnterprise_patch\ SpMikeCtrl.msi
Client		
Client x86	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe
Client x64	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe

3.2.5. Drivers installation matrix – VMware Horizon View

VMware	Server / Virtual Desktop x86	Server / Virtual Desktop x64
Installation SpeechExec Enterprise Dictate/Transcribe and/or RDM Updater Client	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe \3_SpeechExecEnterprise_patch\ DPMControl.msi \3_SpeechExecEnterprise_patch\ SmExAudio.msi \3_SpeechExecEnterprise_patch\ SpMikeCtrl.msi	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe \3_SpeechExecEnterprise_patch\ DPMControl.msi \3_SpeechExecEnterprise_patch\ SmExAudio.msi \3_SpeechExecEnterprise_patch\ SpMikeCtrl.msi
Client		
Client x86	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe
Client x64	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe

3.3. Installation on Unicon eLux RP clients

The necessary packages can be found in the folder \2_LinuxDrivers\Unicon\ or on the eLux website www.mylux.com

Please remove all older Philips Speech Drivers before installing new version.

1. Upgrade the ThinClient(s) with new idf.
2. Upgrade the ICA Client to version 12.x or newer.
3. Import the new package (PhilipsSpeechDrivers-<version>.UC_RP-1.0.zip to the idf tool Elias
4. Add the new package (PhilipsSpeechDrivers-<version>.UC_RP-1.0.zip into the idf image
5. Upgrade the ThinClient(s) with the new idf.

3.4. Installation on Ubuntu clients

1. Make sure an ICA Client (version 12.x or newer) is installed
2. The Ubuntu driver can be found in the folder
 \2_LinuxDrivers\Ubuntu**PhilipsSpeechDriversLinuxSetupUbuntu.sh**
 Copy the file to the Ubuntu client and install the Philips Extension Drivers for Citrix by entering:

```
bash PhilipsSpeechDriversLinuxSetupUbuntu.sh--default_hiddev_dir  
/dev/usb/ --default_joydev_dir /dev/input/ -ica_dir  
/usr/lib/ICAClient  
in the terminal.
```

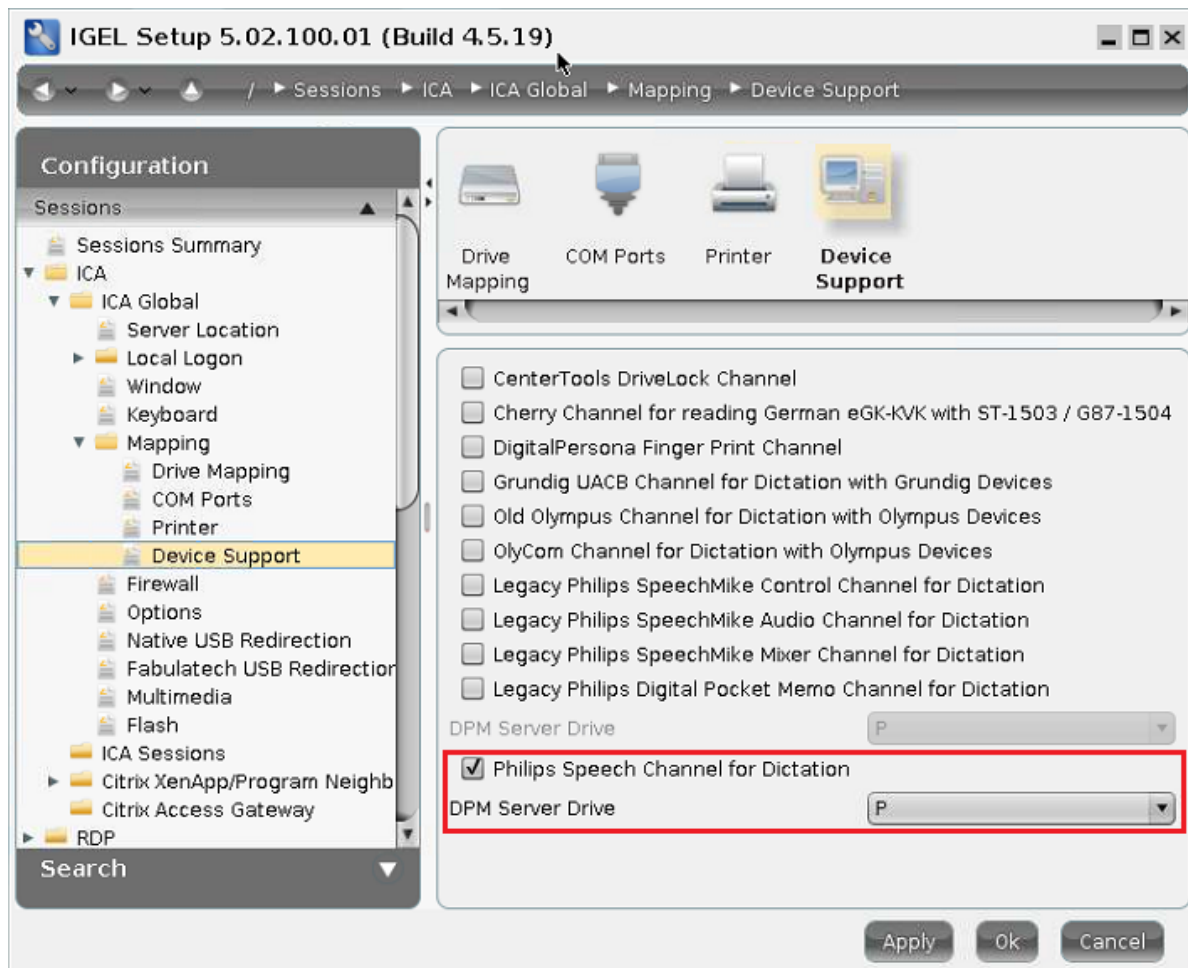
Please note: this script was prepared for Ubuntu 14.04, it might have problems on other versions.

3.5. Installation on Igel Universal Desktop clients

The Igel Universal Desktop operating system already has the Philips extension drivers implemented, they just have to be enabled in the configuration menu.

3.5.1. Citrix on Igel clients

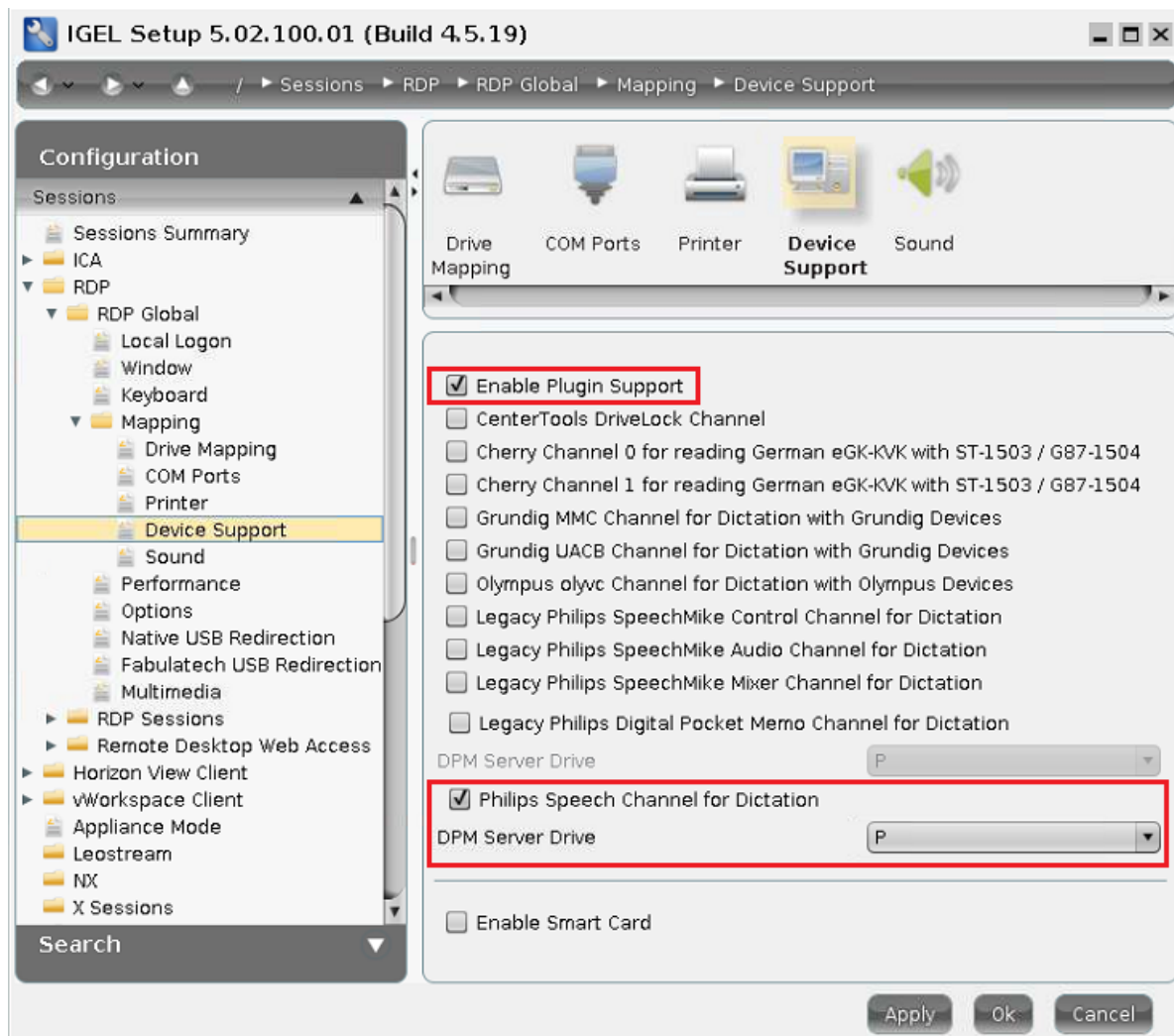
Go to **IGEL Setup / ICA / ICA Global / Mapping / Device Support** and checkmark **"Philips Speech Channel for Dictation"**.



Note: the **"Legacy Philips"** drivers contain the old G5 driver architecture which is NOT compatible with the latest server drivers. It is NOT allowed to have both driver versions selected at the same time (it's also not allowed to enable G5 for Citrix and G12 for RDP and vice versa simultaneously).

3.5.2. Microsoft WTS / Remote Desktop Services on Igel clients

Go to **IGEL Setup / RDP / RDP Global / Mapping / Device Support** and checkmark **“Enable Plugin Support”** and **“Philips Speech Channel for Dictation”**.



Note: the “**Legacy Philips**” drivers contain the old G5 driver architecture which is NOT compatible with the latest server drivers. It is NOT allowed to have both driver versions selected at the same time (it’s also not allowed to enable G5 for Citrix and G12 for RDP and vice versa simultaneously).

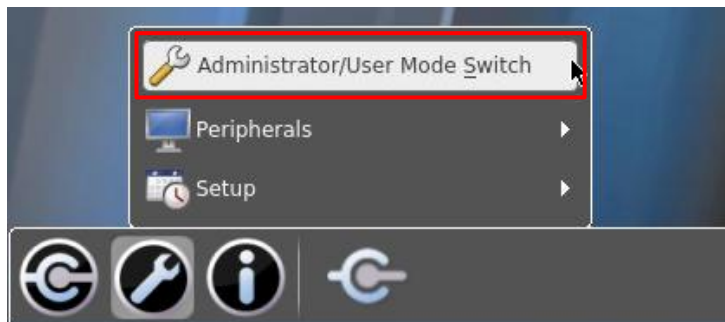
3.6. Installation on HP ThinPro clients

1. Copy the files

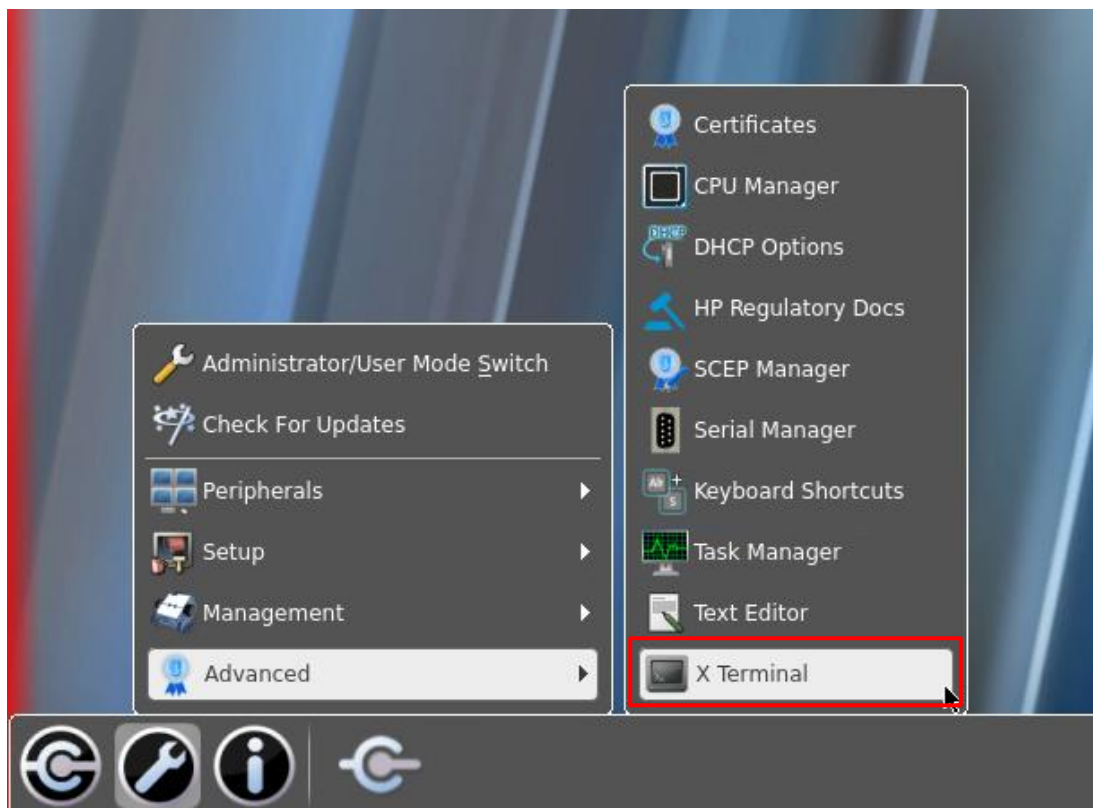
- **PhilipsSpeechDrivers-<version>**
- **sh, joydev-3.8.13-hp_i386.deb**
- **DPMMountd.conf**

from the \2_LinuxDrivers\HP\ folder to a USB flash drive and plug it into the HP ThinPro client.

2. On the HP ThinPro device, click **Control Panel** and switch to **Administrator Mode**:



3. After that, navigate to **Control panel – Advanced** and open **X Terminal**:



4. In the Terminal, enter **fsunlock** to allow modifying the files and folders on the ThinPro device:

```
root@HPc8cbb8193c60:/writable/home/user# fsunlock
```

5. Copy the drivers **PhilipsSpeechDrivers-<version>.sh** and **joydev-3.8.13-hp_i386.deb** from your USB flash drive to the **/tmp** directory (in the following example, the name of the USB flash drive is *SanDiskCruzer_sdb1*):

```
root@HPc8cbb8193c60:/writable/home/user# cp /media/SanDiskCruzer_sdb1/* /tmp
```

6. Navigate to the **/tmp** folder and install the JOYDEV driver, which is required for the **Philips Foot Control** devices, by entering:

```
dpkg -i joydev-3.8.13-hp_i386.deb
```

```
root@HPc8cbb8193c60:/tmp# dpkg -i joydev-3.8.13-hp_i386.deb
```

7. Install the Philips Extension Drivers for Citrix by entering:

```
bash PhilipsSpeechDrivers-<version>.sh --default_hiddev_dir /dev/usb/  
--default_joydev_dir /dev/input/ -ica_dir /usr/lib/ICAClient
```

```
root@HPc8cbb8193c60:/tmp# bash PhilipsSpeechDrivers-12.2.7.sh --default_hiddev_d  
ir /dev/usb/ --default_joydev_dir /dev/input/ -ica_dir /usr/lib/ICAClient  
Philips Speech Drivers Setup v12.2.7  
unpacking...done  
SETUP_ICA_DIR: /usr/lib/ICAClient  
SETUP_HID_DIR: /dev/usb/  
SETUP_JOY_DIR: /dev/input/  
SETUP_DPM_DIR: P:\  
SETUP_DPM_LOCALPATH: /tmp/PhilipsDPM  
SETUP_BIN_DIR: /usr/local/bin  
SETUP_LIB_DIR: /usr/lib  
DPMMountd: no process found  
creating udev rule file: /etc/udev/rules.d/40-permissions.rules  
Updating udev settings for SpeechMike II devices  
Thinwire3.0, Clipboard, ClientDrive, ClientPrinterQueue, ClientAudio, ClientComm  
, FlashV2, TWI, ZL_FONT, ZLC, ICACTL, SmartCard, UserExperience, MultiMedia, Gen  
ericUSB, HDXRTME, PSPDPM, SpeechMike, SpeechMikeAudio, SpeechMikeMixer, PSPHID  
Starting Philips DPM Handler  
root@HPc8cbb8193c60:/tmp#
```

8. Copy **DPMMountd.conf** to the **/etc/init/** directory and change its permission to **644**:

```
root@HPc8cbb8193c60:~# cp /media/SanDiskCruzer_sdb1/DPMMountd.conf /etc/init/  
root@HPc8cbb8193c60:~# chmod 644 /etc/init/DPMMountd.conf
```

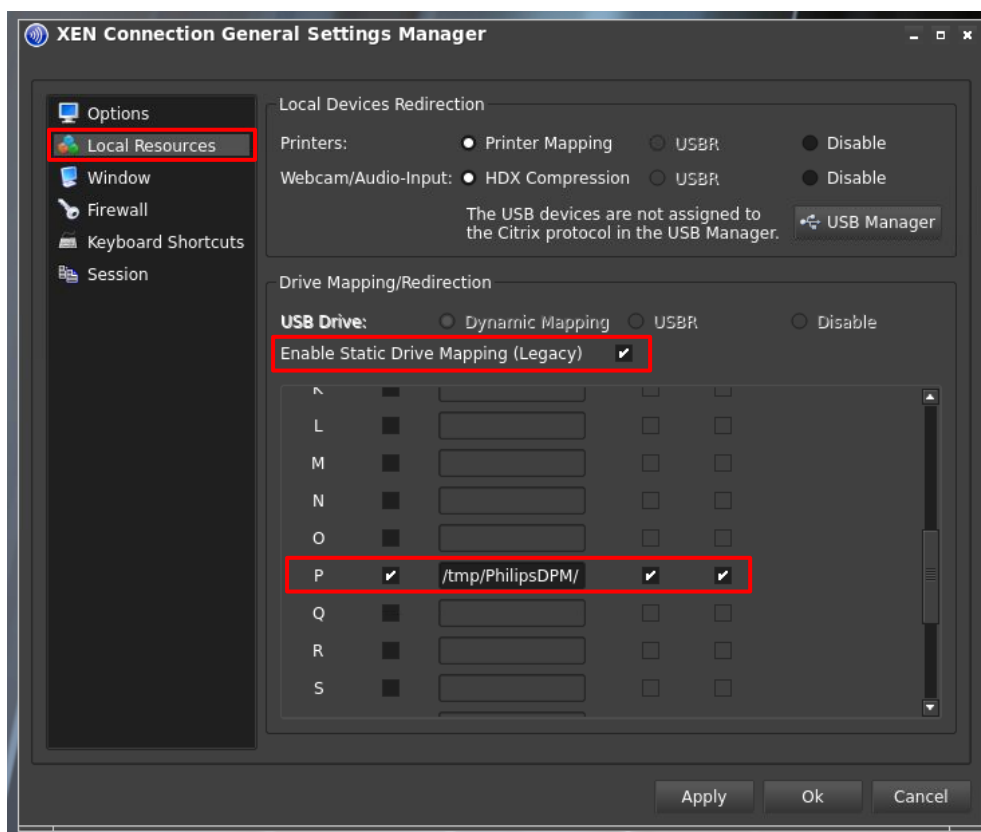
9. Lock the file system again by entering **fslock**:

```
root@HPc8cbb8193c60:/tmp# fslock
```

10. To enable the dictation file download functionality of the **Philips Digital Pocket Memo** devices, the following steps are required: open the **Connection Manager**, navigate to the **Citrix** settings...



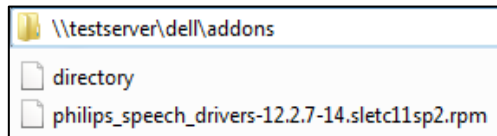
11. ...select **Local Resources** on the left, checkmark **Enable Static Drive Mapping (Legacy)**, checkmark all boxes in the line of letter **P** and enter **/tmp/PhilipsDPM/** into the text field:



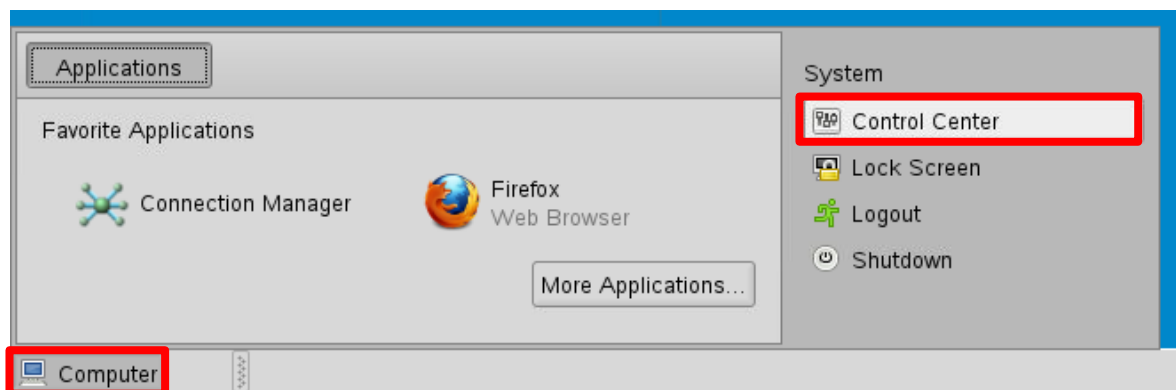
Please note, that a factory reset on the ThinPro thin client removes all the drivers, so you would have to install them again!

3.7. Installation on Wyse enhanced SUSE clients

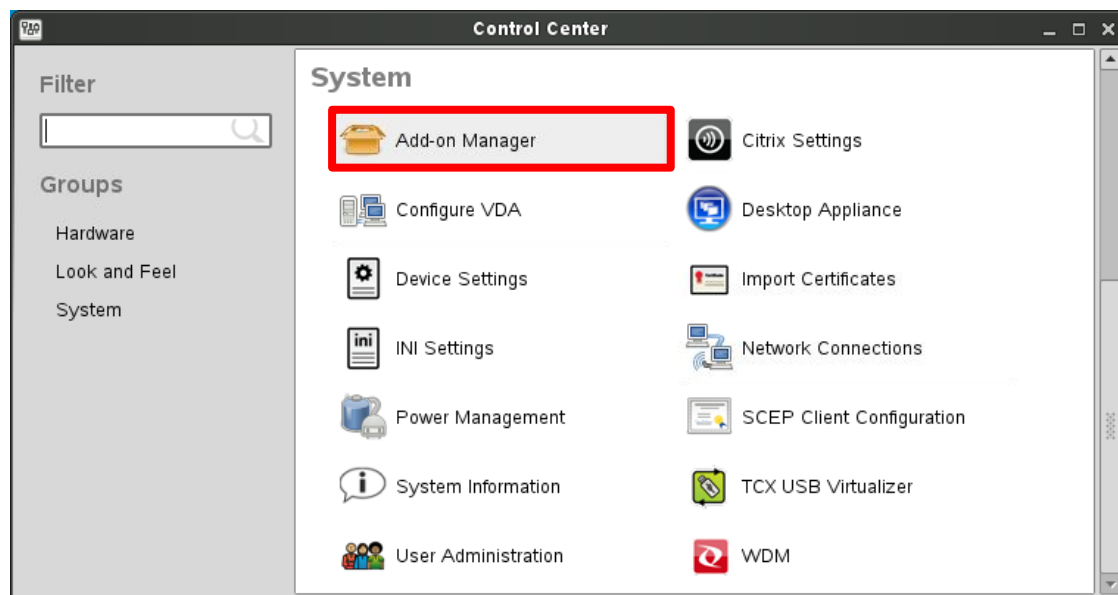
1. Create a shared folder on an FTP server and name it, for example, “**dell**”.
2. Copy the **addons** folder from the folder \2_Linux\DellWyse\ to the created shared folder:



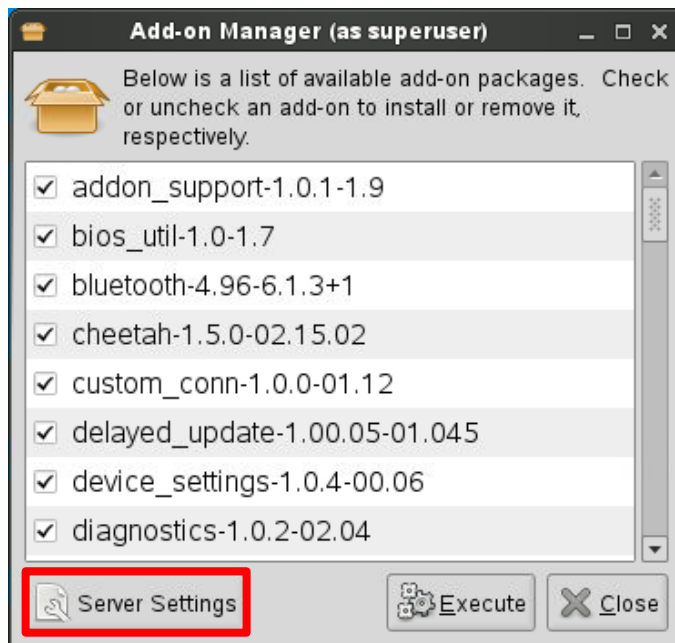
3. On the thin client, go to **Computer – Control Center**:



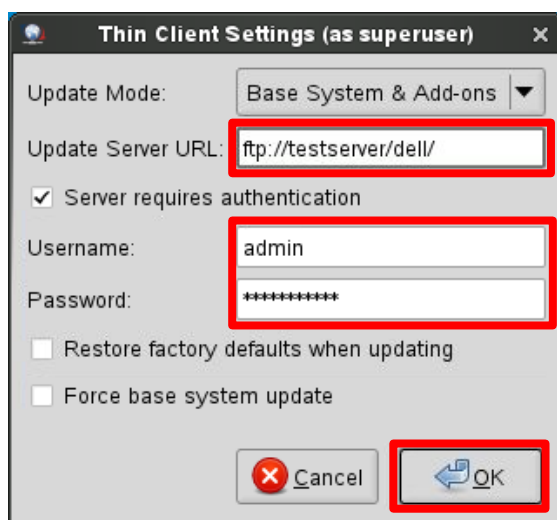
4. Click **Add-on Manager**:



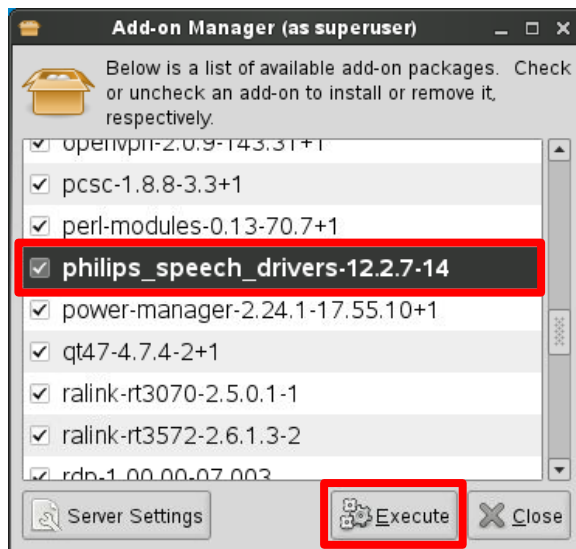
5. Click **Server Settings**:



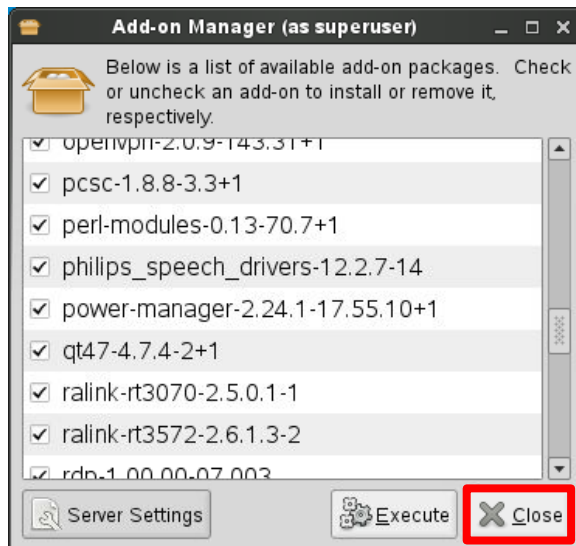
6. Enter the URL of your **shared folder** and the **user credentials** into the according fields and click **OK**. Please note that the “addons” string **must not** be entered:



7. Scroll down to the **philips_speech_drivers** package, **checkmark** the drivers and click **Execute**.



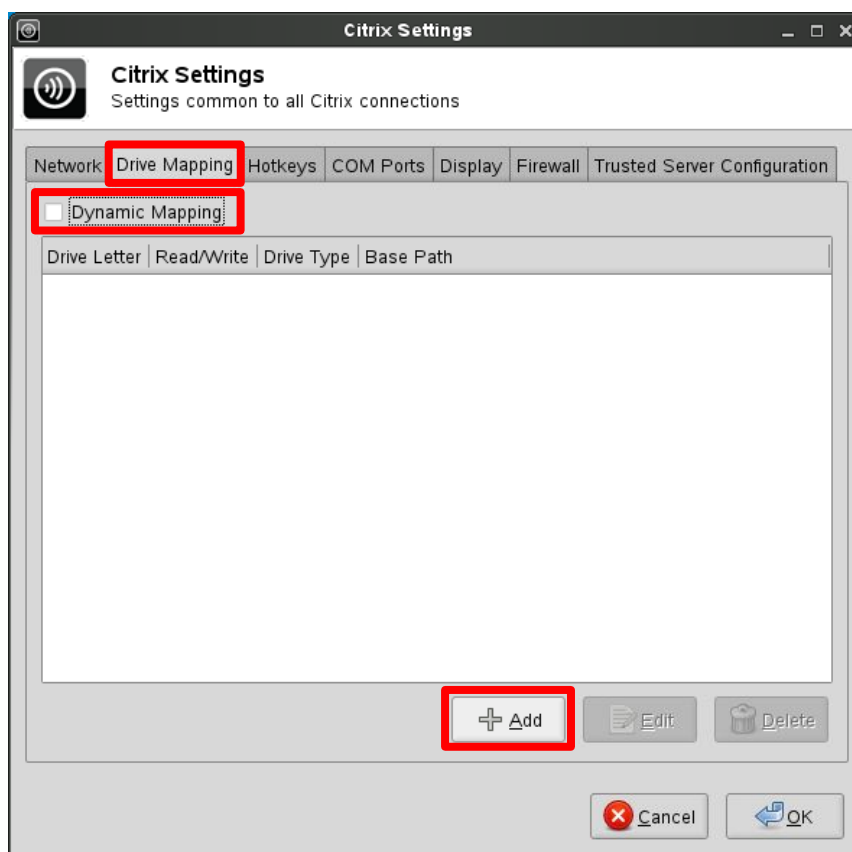
8. Once the drivers have been successfully installed, click **Close**:



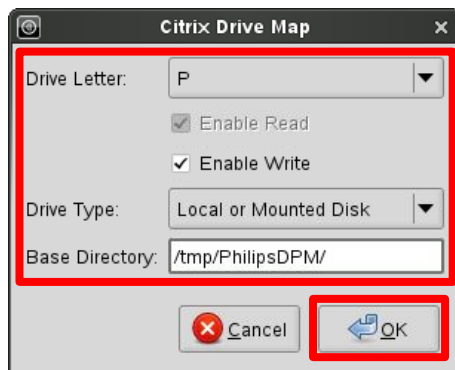
9. Now go to **Control Center – Citrix Settings**:



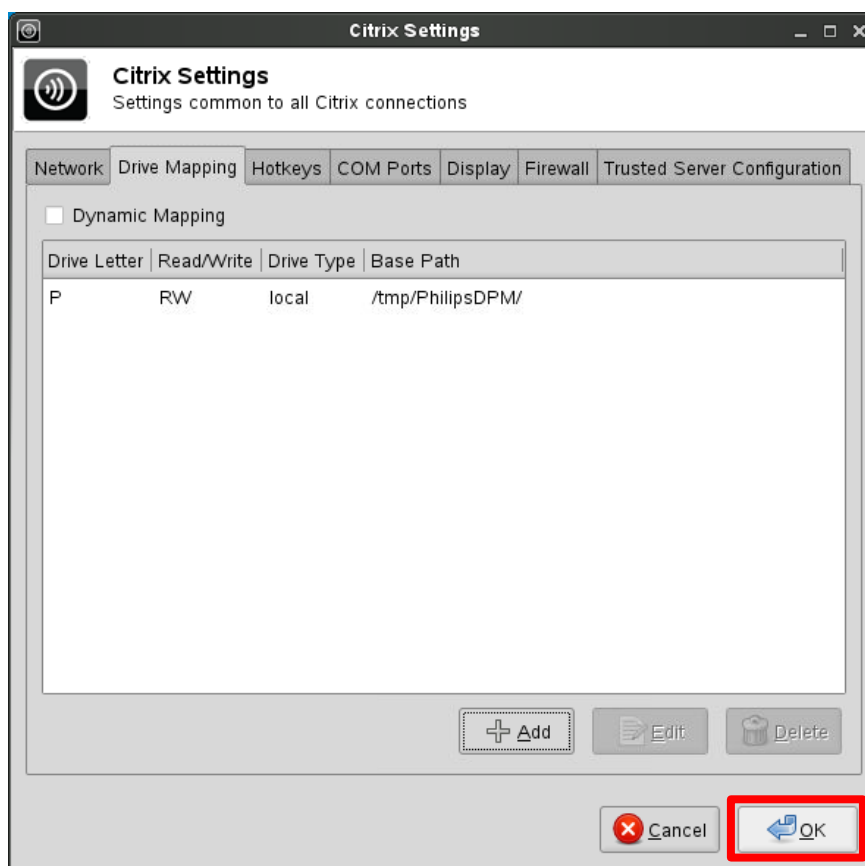
10. Click the **Drive Mapping** tab, deselect **Dynamic Mapping** and click **Add**:



11. Select Driver Letter **P**, checkmark **Enable Read** and **Enable Write**, select Drive Type **Local or Mounted Disk**, for Base Directory enter **/tmp/PhilipsDPM/** and click **OK**.



12. Confirm the settings by clicking **OK**:



Please note, that a factory reset on the Wyse thin client removes all the drivers, so you would have to install them again!

3.8. Installation on Stratodesk noTouch clients

The Stratodesk noTouch operating system already has the Philips extension drivers implemented, they just have to be enabled in the configuration menu.

3.8.1. Citrix on Stratodesk noTouch clients

Go to **System configuration / Connections / <your Citrix connection> / Citrix / Dictation device/SpeechMike driver** and select “**Philips G12**”:

The screenshot shows a window titled "System configuration" with a list of settings. The "Dictation device/SpeechMike driver" setting is highlighted with a red rectangle and is set to "Philips G12".

printers in mapping	on
Auto-connected printer (e.g. lp_par or lp_usb)	
Driver for auto-connected printer (e.g. HP LaserJet 2100)	
Map local serial/COM ports	on
Map CDC/ACM as serial port	off
Smartcard login	no setting
Map local drives	on
Include system-defined drives in mapping	auto
Dynamic local drive mapping	on
Dictation device/SpeechMike driver	Philips G12
Cherry eHealth card driver	off
Keyboard mapping file	linux
Extended Unicode Keyboard Support (EUKS)	Use EUKS whenever possible
Keyboard layout	
Transparent key pass-through	Server within Full Screen Sessions only
Use local input method	on
Send Ctrl-V (Paste) on middle button	on

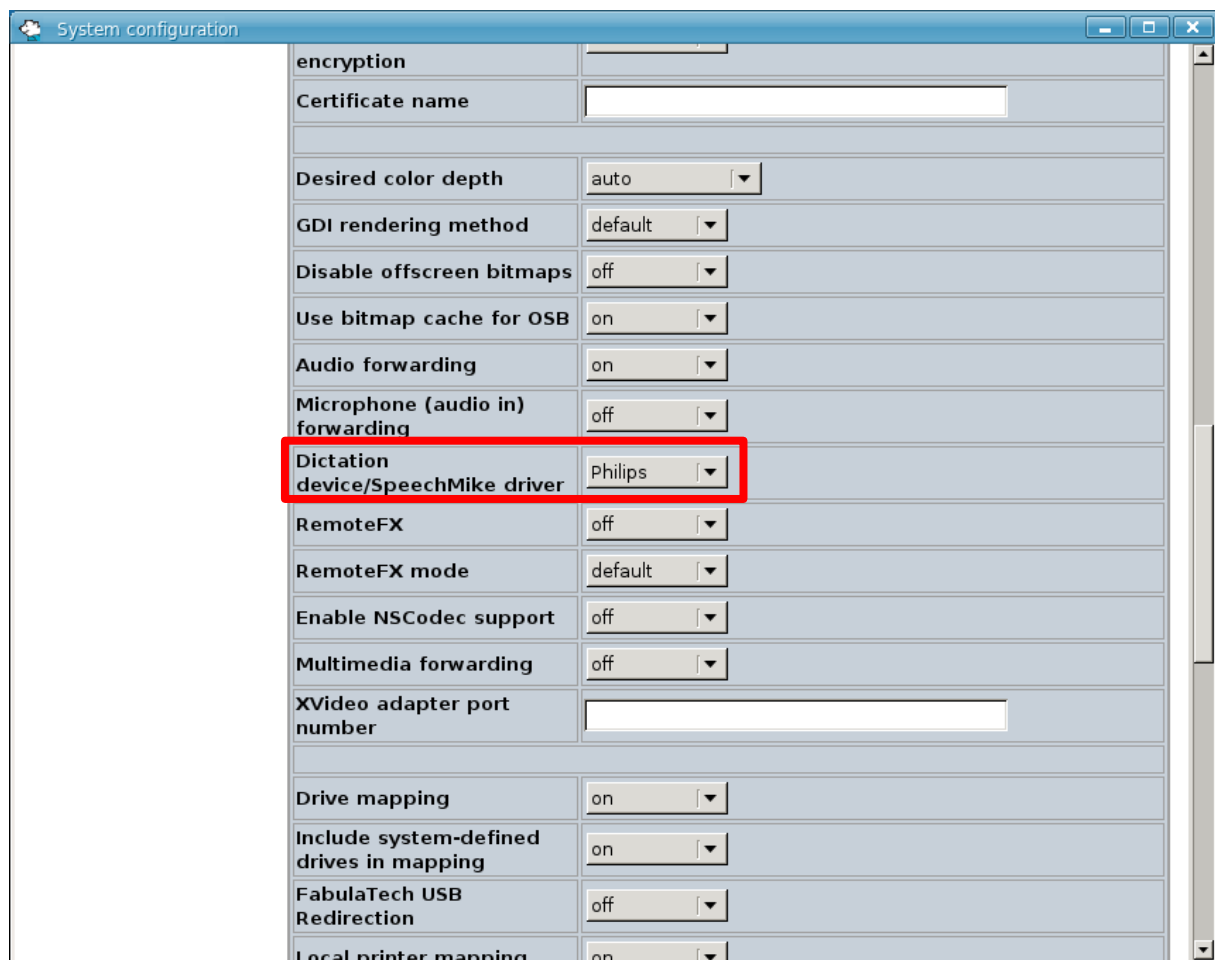
3.8.2. Microsoft WTS / Remote Desktop Services on Stratodesk noTouch clients

Go to **System configuration / Connections / <your FreeRDP connection> / FreeRDP** and...

1. Ensure that the **version of the FreeRDP client** is **1.2**:



2. Scroll down to **Dictation device/SpeechMike driver** and select **"Philips"**:



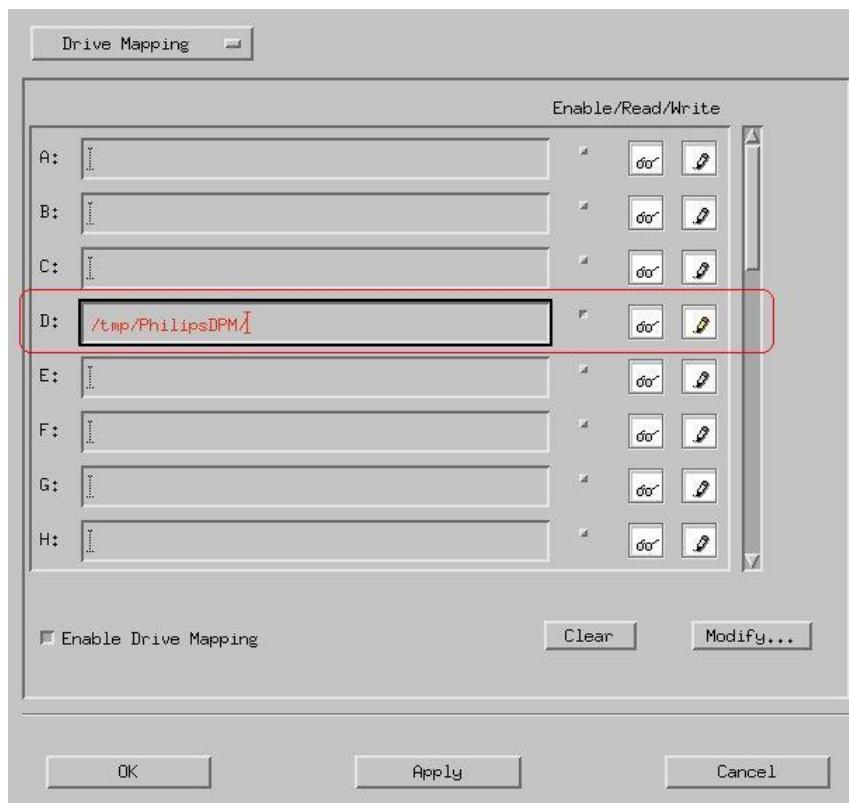
4. General configuration on Linux clients

4.1. DPM drive mapping on Citrix clients

In order to change the drive mapping of the Session you have to change the following parts:

1. Change the drive mapping in the ICA client
2. Adapt the **Settings.ini** according to the desired drive letter.

Ad1) the screenshot below shows the ICA client drive mapping configuration.



Ad2) Open the /etc/PhilipsSpeech/**Settings.ini** file with a text editor and change the “**DPM Server Path**” value according to your needs, for example:

```
DPM Server Path = D:\
```

4.2. Foot Control button assignment on Linux clients

4.2.1. Default Foot Control configuration and commands



Default values for Linux clients (Settings.ini file):

Button Function	Button	Value Decimal
Fast rewind	1	12
Play (Press and Hold)	2	4
Fast forward	3	14
EOL	4	10

4.2.2. Foot Control configuration file

Change the `/etc/PhilipsSpeech/Settings.ini` on the client according to your needs:

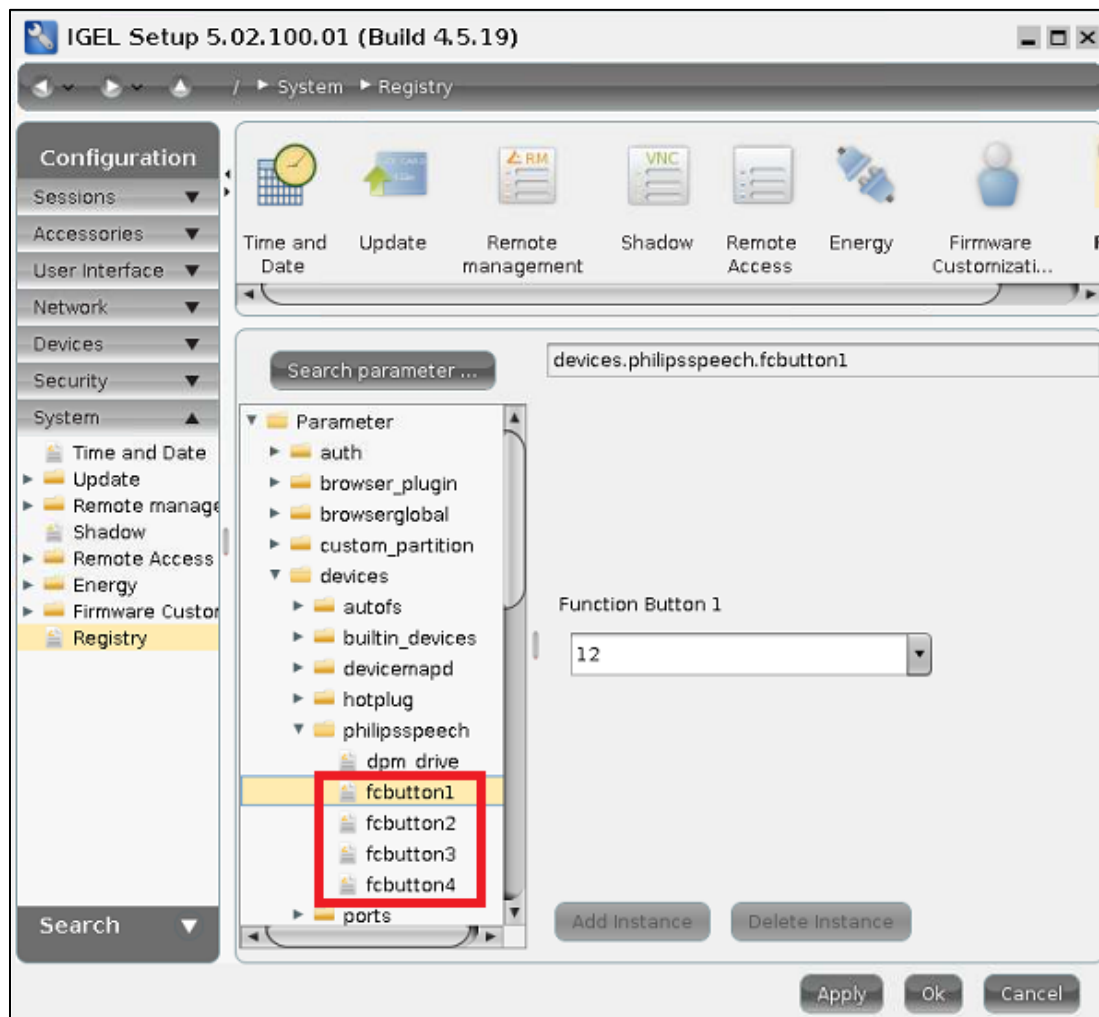
```
FCBUTTON1=  
FCBUTTON2=  
FCBUTTON3=  
FCBUTTON4=
```

Example: Default button settings:

```
FCBUTTON1=12  
FCBUTTON2=4  
FCBUTTON3=14  
FCBUTTON4=10
```

4.2.3. Foot Control button assignment on Igel clients

Go to **IGEL Setup / System / Registry / devices / philipsspeech** and change the settings according to your needs



5. Windows server / virtual desktop and client driver setup

5.1. General information

Philips Drivers have only one setup file which is **common for Windows servers / virtual desktops and Windows clients**.

If you want to install the Citrix client extensions, install the Citrix ICA client software first, otherwise the according option in the install wizard will not be available.

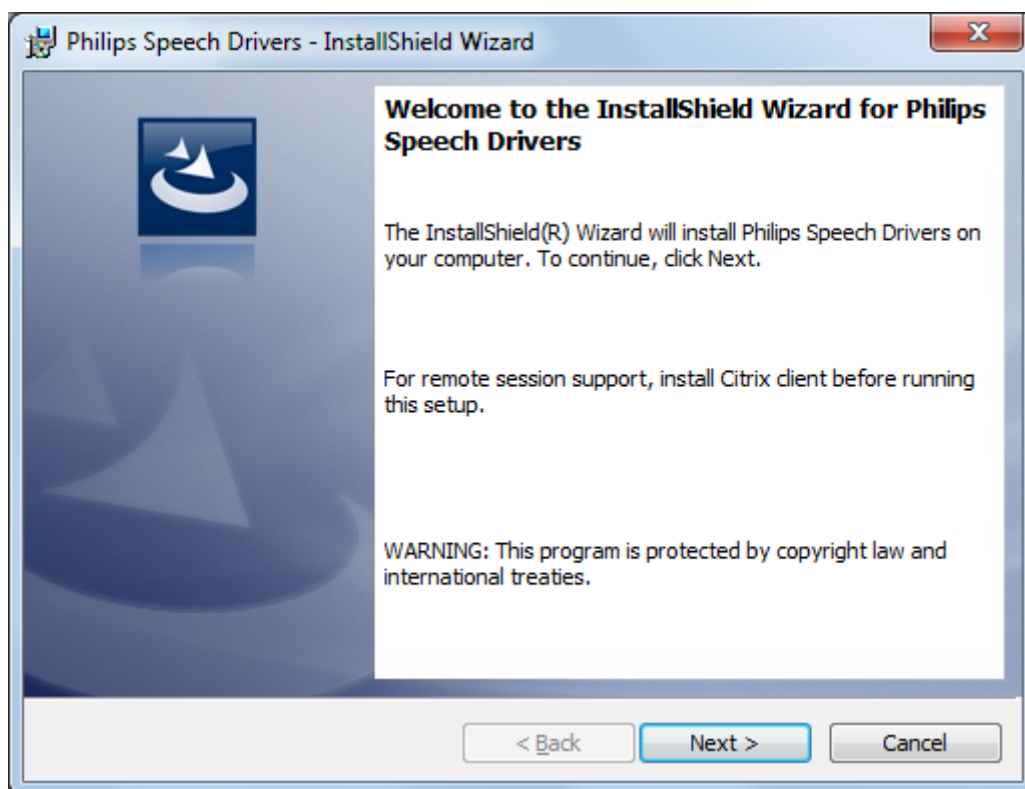
If you want to install the VMware Horizon View extensions, please consider [chapter 6](#) (VMware Horizon View Settings) before you start with the installation.

5.2. Installation of the server / virtual desktop drivers

5.2.1. Start

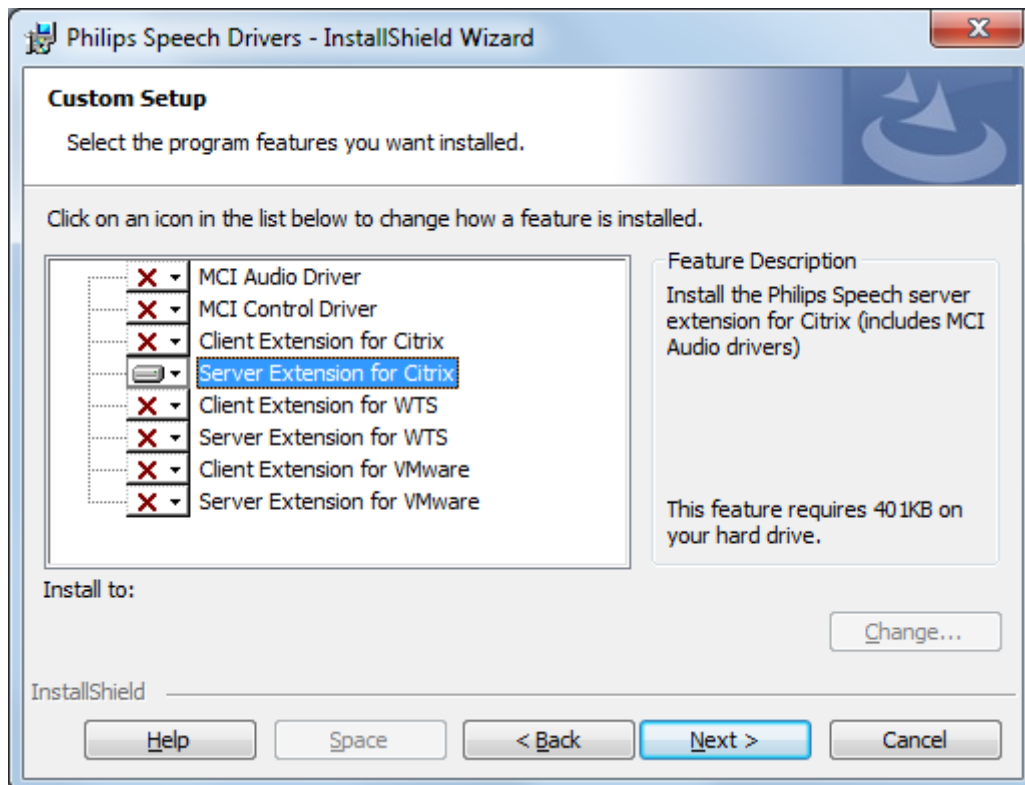
Start the PhilipsSpeechDriversSetup.exe

Click on **Next** Button



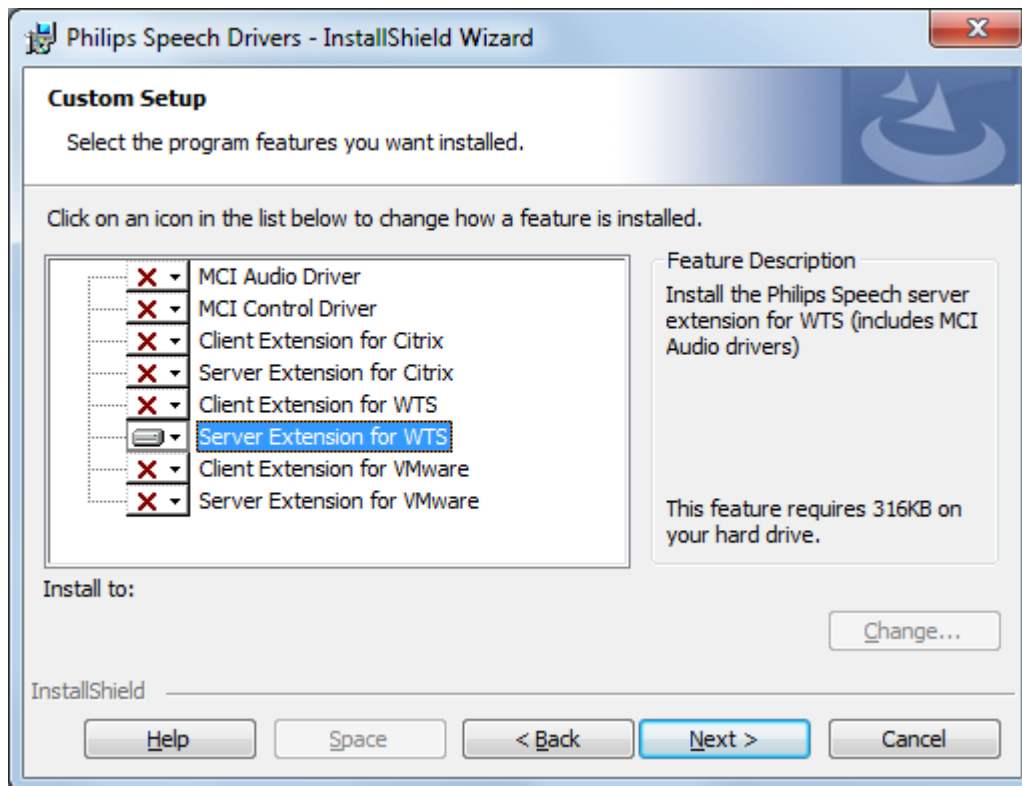
5.2.2. Citrix selection

This chapter shows the Citrix server / virtual desktop installation settings.



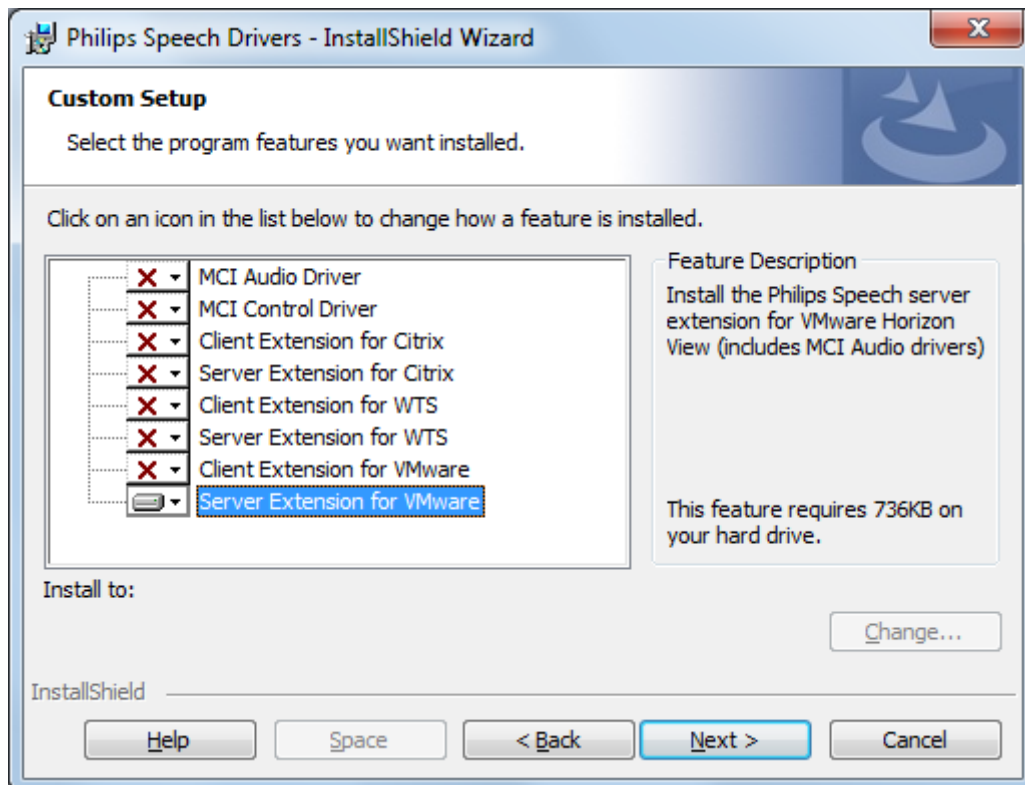
5.2.3. Microsoft WTS / Remote Desktop Services selection

Choose the option shown in the screenshot below, if you're using Microsoft WTS / Remote Desktop Services.



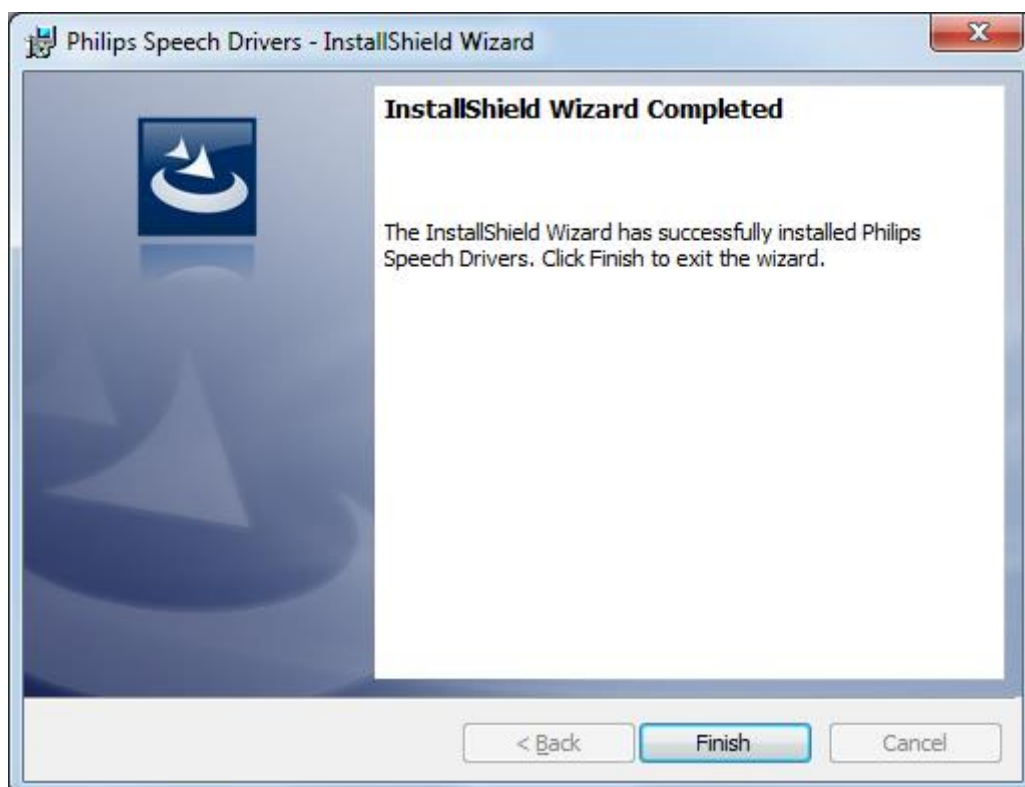
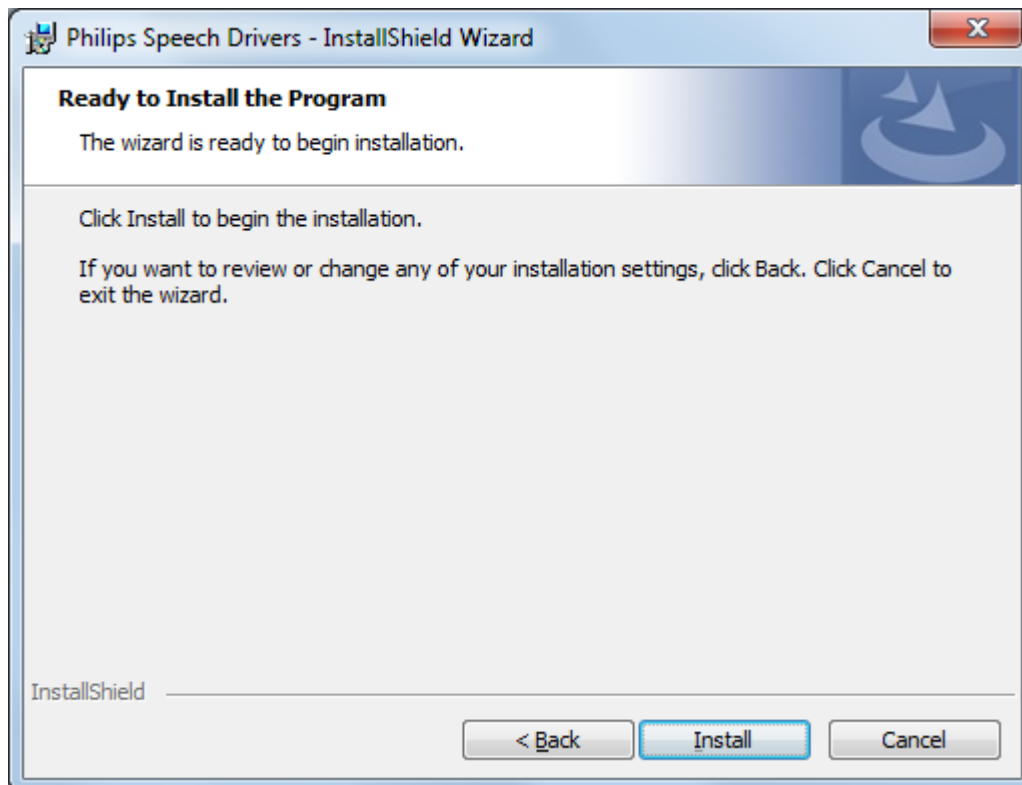
5.2.4. VMware Horizon View selection

Choose the option shown in the screenshot below, if you're using VMware Horizon View.



5.2.5. Finish installation

Click on button **Install**



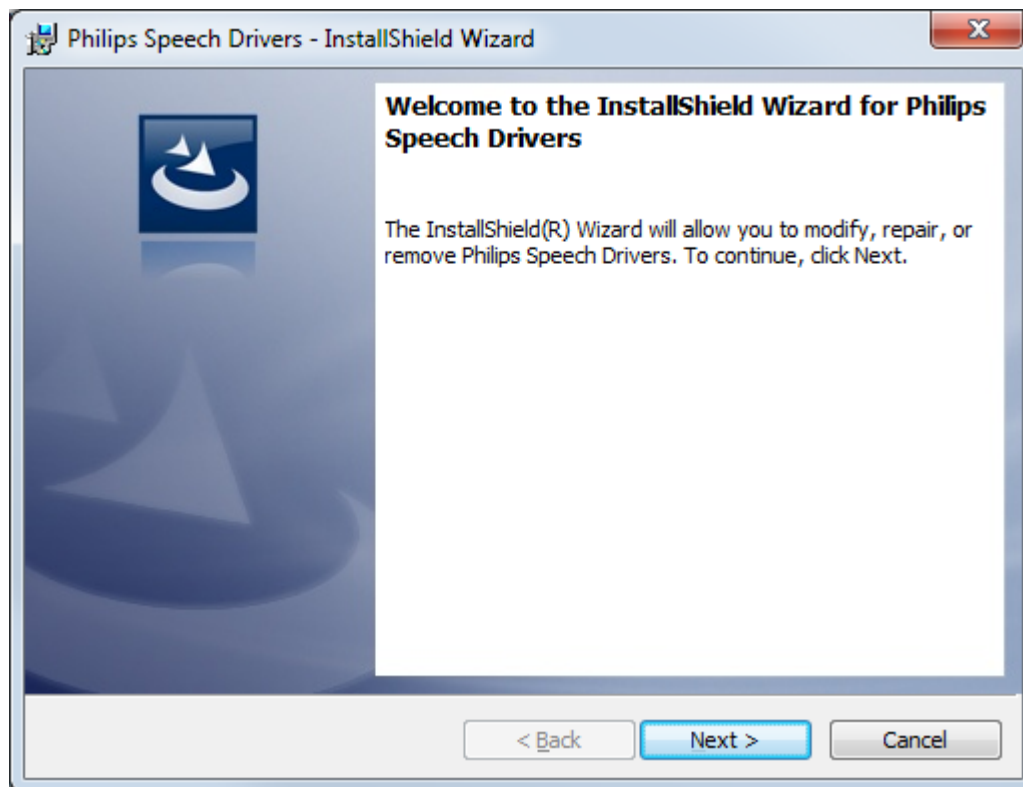
InstallShield wizard has successfully installed the Philips Speech drivers - click **Finish**. If asked, please perform a restart for the configuration changes made by Philips Speech Drivers to take effect.

5.3. Client installation

If you want to use CITRIX please make sure that ICA Client version 12.x or newer is installed BEFORE you install the Philips drivers

5.3.1. Start

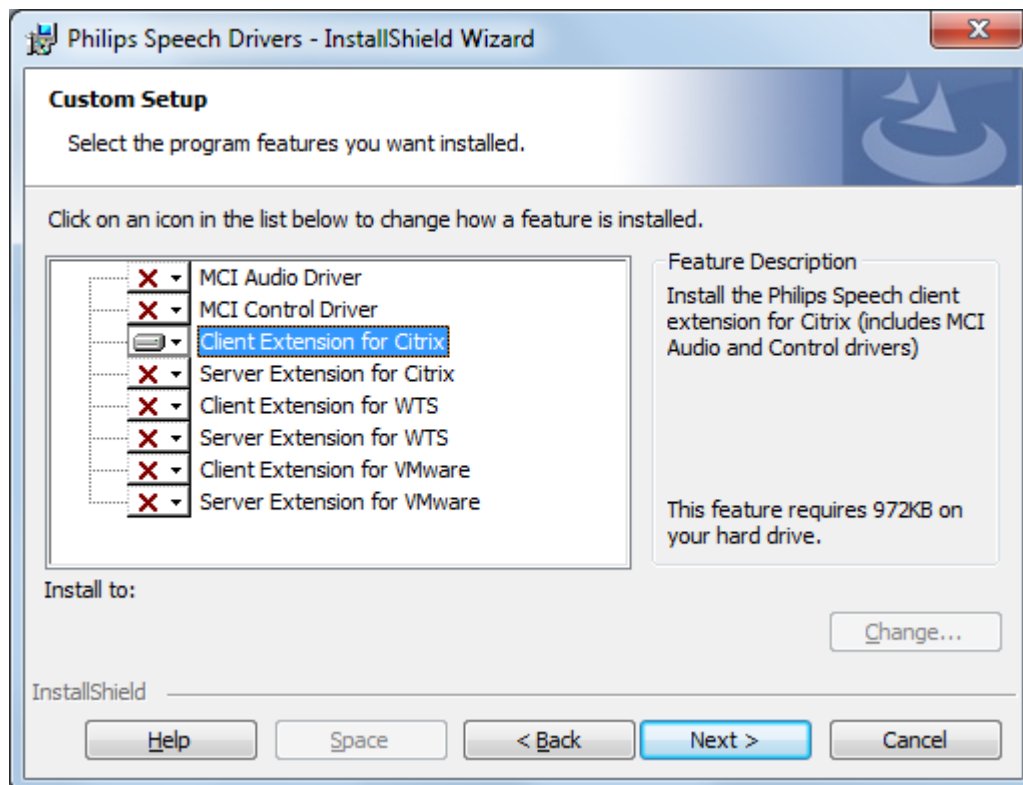
Start the PhilipsSpeechDriversSetup[x64].exe



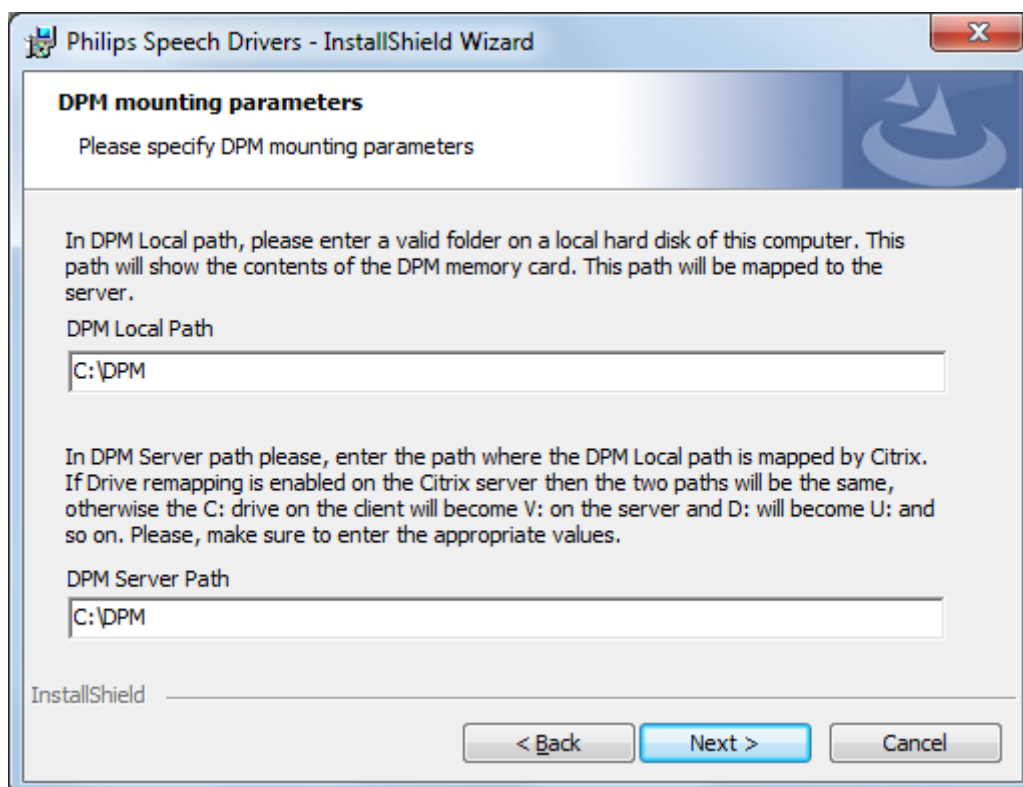
Click **Next**

5.3.2. Citrix

This chapter shows the CITRIX client installation settings.



Select the options as displayed in the screenshot and click **Next**.



- For the “DPM Local Path” please enter a valid folder on local hard disk of this computer - this path will show the contents of the DPM memory card.
- In the “DPM Server Path” please enter the path where the DPM Path appears in the Citrix Session.
- If drive remapping is enabled on the Citrix server then the two paths will be the same, otherwise the C: drive on the client will become the V: drive on the server, the D: will become U: and so on.

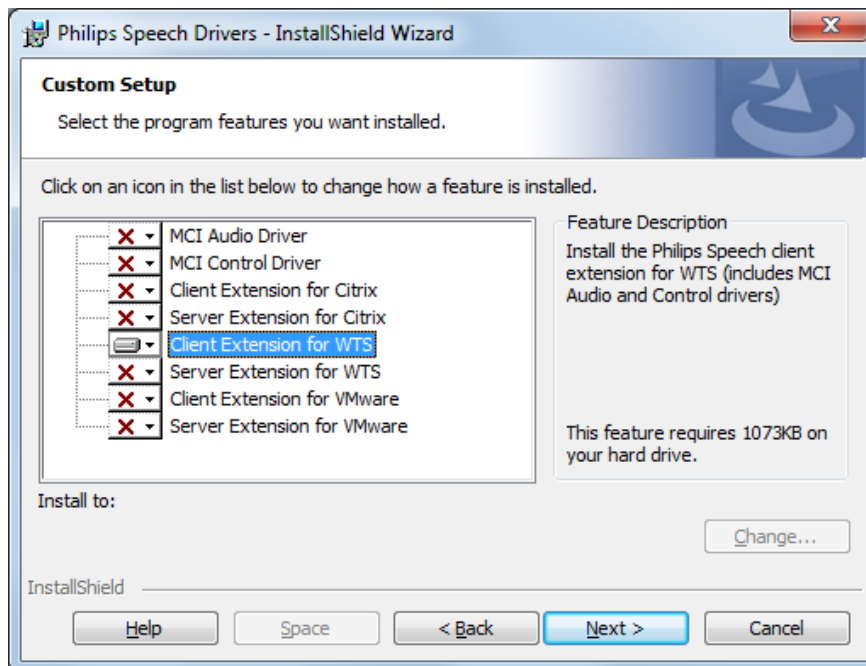
The DPM Path settings can be changed later by reinstalling the Drivers.

Note:

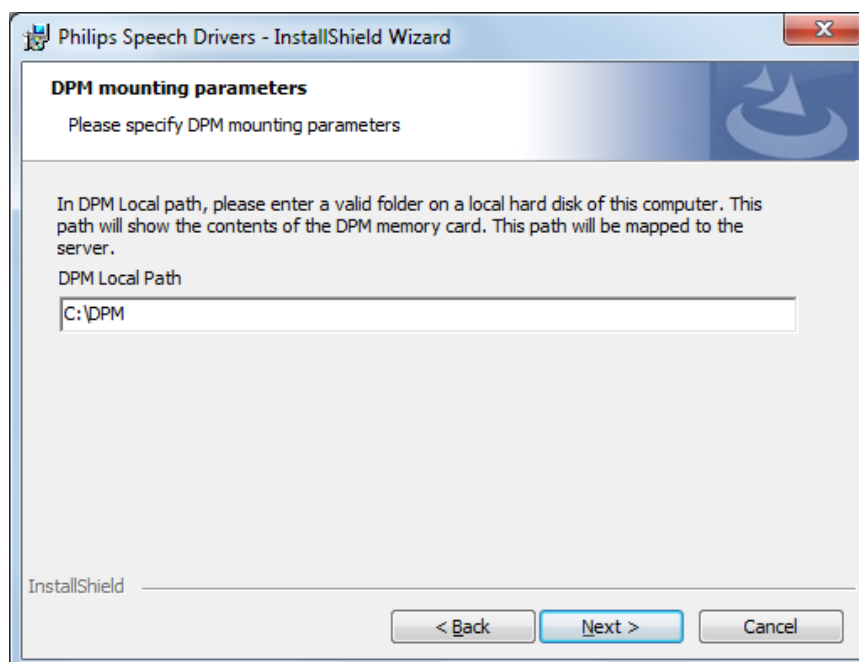
Please be aware that the drive letter defined for “DPM Server Path” gets released in case you remove the “DPM Mounter Service”. If a real physical hard drive is defined for “DPM Server Path” this would mean that you have to reallocate the drive letter for the relevant drive in the operating system.

5.3.3. Microsoft WTS / Remote Desktop Services

This chapter shows the Microsoft WTS / Remote Desktop Services client installation settings.



Select the options as displayed in the screenshot and click **Next**.



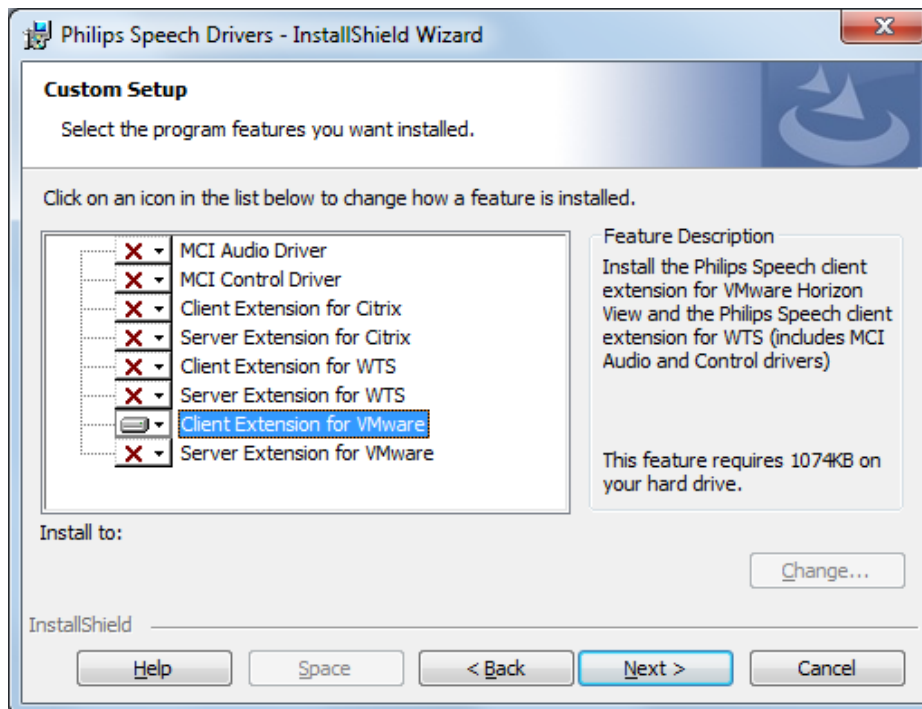
For the DPM Local Path please enter a valid folder on local hard disk of this computer – this path will show the contents of the DPM memory card. The DPM Local Path can be changed later by reinstalling the Drivers.

Note: Please be aware that the drive letter defined for “DPM Server Path” gets released in case you remove the “DPM Mounter Service”. If a real physical hard drive is defined for “DPM Server Path” this would mean that you have to reallocate the drive letter for the relevant drive in the operating system.

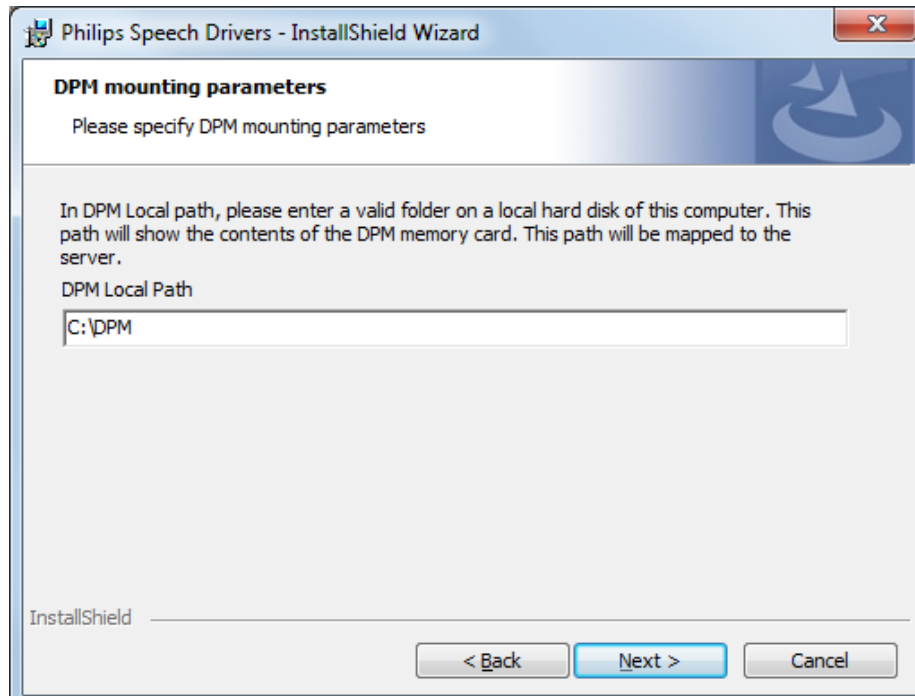
Note: Drive Mapping only works for NTFS file systems. (e.g. FAT will fail)

5.3.4. VMware Horizon View

This chapter shows the VMware Horizon View client installation settings.



Select the options as displayed in the screenshot and click **Next**.

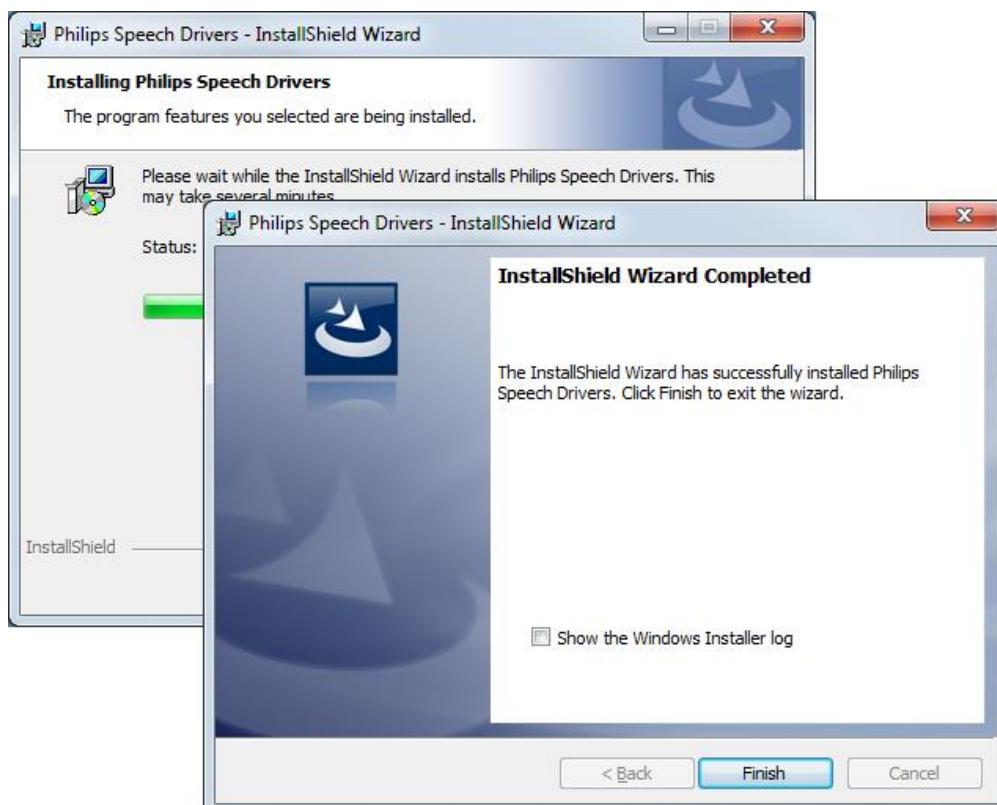
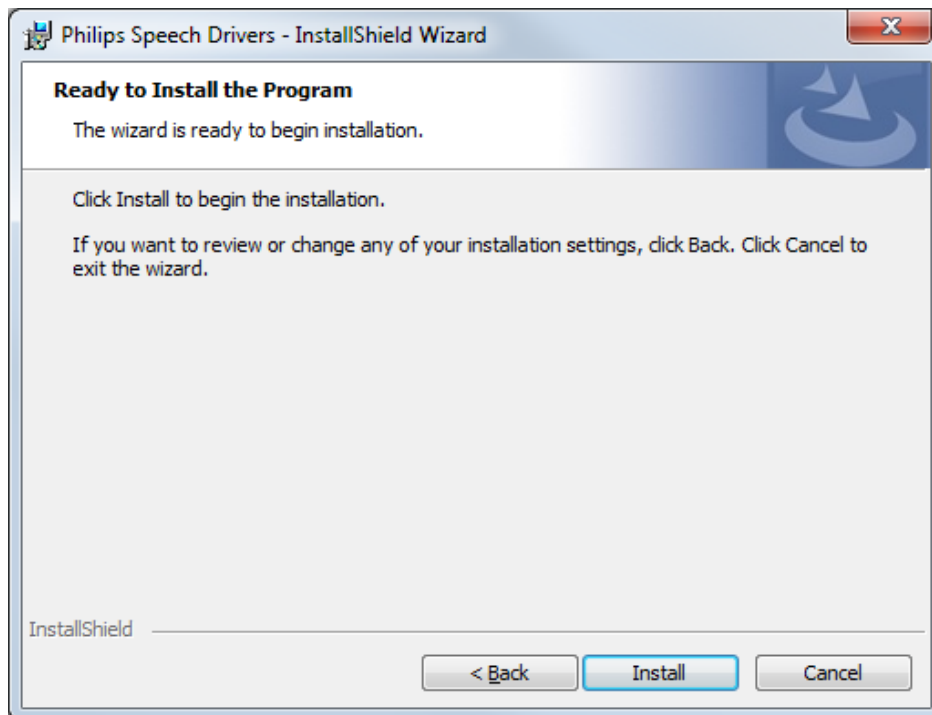


Note:

When installing the VMware client extensions, the WTS client extensions will be also installed automatically. The DPM mounting parameters settings will be ignored by the VMware Horizon View client as VMware currently doesn't support the mapping of local drives to the virtual machine. For more information see chapter [VMware Horizon View Settings](#).

5.3.5. Finish installation

If all the settings were correct click **Install**



The InstallShield Wizard has successfully installed the Philips Speech Drivers on your computer. Click button **FINISH** to exit the wizard.

5.4. Command line installation – silent setup

You can use the following setup types:

Normal (interactive) **setup**: PhilipsSpeechDriversSetup.exe [exe_parameters] /V"<MSI parameters>"

Administrative setup: PhilipsSpeechDriversSetup.exe /a

Logged setup: PhilipsSpeechDriversSetup.exe /V"/l*v c:\setuplog.txt"

Basic Setup.exe parameters:

The most important parameters passed directly to PhilipsDeviceControlCenterSetup.EXE (indicated as [exe_parameters] in the command-line above):

- /a: Administrative installation
- /x: Uninstall mode
- /v: Pass arguments to MSISExec (MSI parameters, see Setup project parameters (MSI parameters))

Important: Parameter names and values are case-sensitive!

Feature parameter names and possible values:

MCIAUDIO	YES NO
MCICONTROL	YES NO
CITRIXCLIENTEXTENSION	YES NO
CITRIXSERVEREXTENSION	YES NO
WTSCIENTEXTENSION	YES NO
WTSSERVEREXTENSION	YES NO
VMWARECLIENTEXTENSION	YES NO
VMWARESERVEREXTENSION	YES NO

The default values depend on the operating system version and the installed components:

- MCIAUDIO and MCICONTROL is installed for non-server operating systems
- CITRIXCLIENTEXTENSION can be installed only if Citrix client is already installed
- CITRIXSERVEREXTENSION, WTSSERVEREXTENSION and VMWARESERVEREXTENSION cannot be installed on the same computer

Example

PhilipsSpeechDriversSetup.exe /V"/qn MCIAUDIO=NO"

6. VMware Horizon View settings

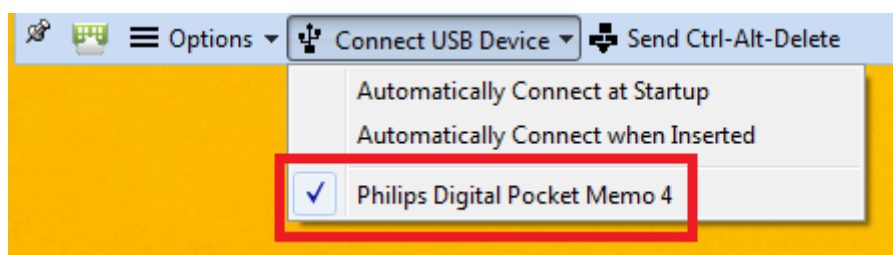
In a VMware Horizon View environment, the following configuration steps are required for a working setup, depending on the used Philips dictation hardware.

Note: VMware Horizon View also supports native USB device redirection by using filtering rules, which means that USB devices (like SpeechMike) can be connected to the virtualized desktop as if they had been physically plugged into it. However, our tests have shown that native USB redirection can result in bad audio quality and delays during recording and playback, so in case audio recording or playback is used in a VMware Horizon View environment, it is mandatory to install the according Philips Speech Drivers for VMware Horizon View on client and target side.

6.1. Scenario 1: Digital Pocket Memo

As VMware Horizon View does **not** allow the mapping of local drives to the virtual desktop, it is required to map the DPM device using the VMware USB device redirection functionality.

Therefore, plug in the DPM device at the client machine, click **Connect USB Device** in the VMware Horizon Client and select the Digital Pocket Memo device in the dropdown menu.



Now the DPM appears as a “local” device in the virtual machine.

In this scenario it is **not required** to install the Philips Speech drivers as the built-in VMware Horizon View USB redirection functionality is sufficient for the dictation-download functionality.

Please note that using the DPM device as a **USB microphone** is **currently not supported** in VMware Horizon View environments.

6.2. Scenario 2: SpeechMike / Foot Control

If only SpeechMike and / or Foot Control are used, install the Philips Speech Extension Drivers on client and target side as described in chapter [Windows Server / Virtual Desktop and Client Driver Setup](#).

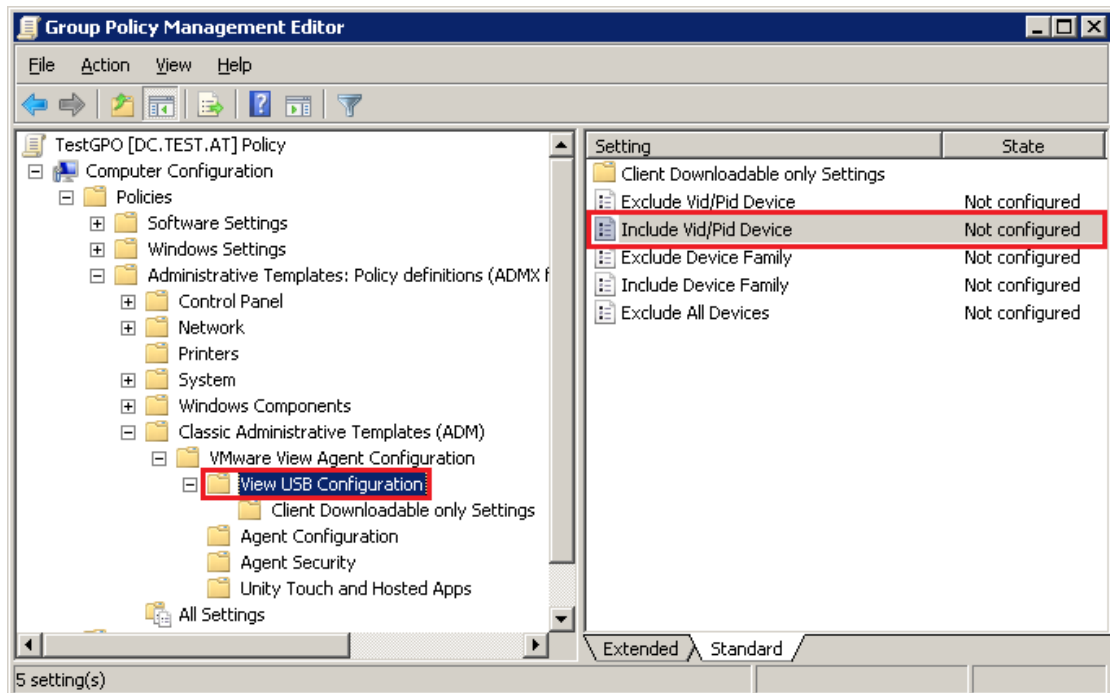
6.3. Scenario 3: SpeechMike / Foot Control AND Digital Pocket Memo

In case SpeechMike / Foot Control **and** Digital Pocket Memo are used on the same virtual desktop, some additional settings are required to ensure trouble free usage of all devices in the VMware Horizon View environment.

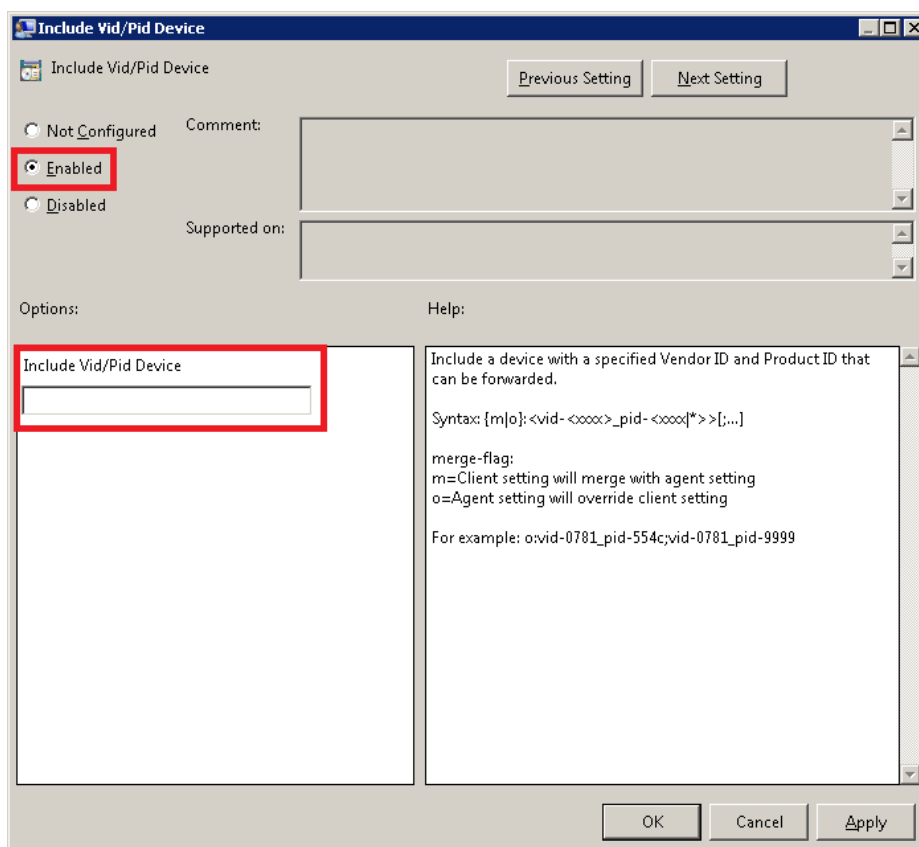
1. On your Domain Controller, assign a group policy to the Organizational Unit which contains your virtual desktops, open this policy and add the administrative template „**vdm_agent.adm**” to the policy.

For more information on how to use VMware View templates in Active Directory see <http://pubs.vmware.com/view-50/index.jsp#com.vmware.view.administration.doc/GUID-76498F8F-BAD5-4835-86F1-2981EBA6ECF9.html>

2. Open the group policy, go to ... / **Vmware View Agent Configuration / View USB Configuration** and double click **Include Vid/Pid Device**



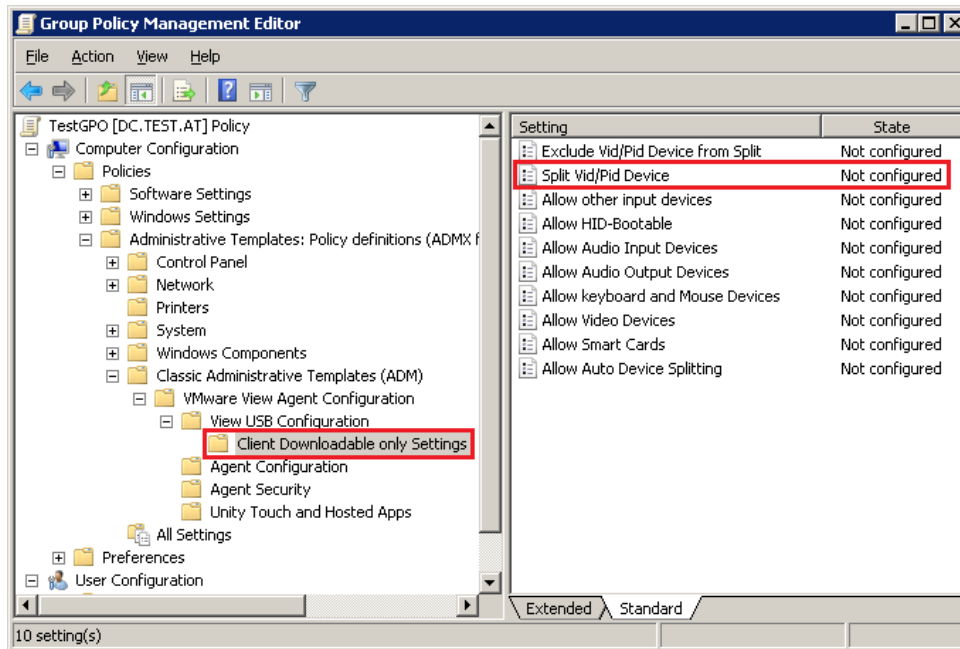
3. Select **Enabled** and enter the according values into the **Include Vid/Pid Device** field (for more details see [chapter 6.3 VMware View USB Configuration](#)) and click OK.



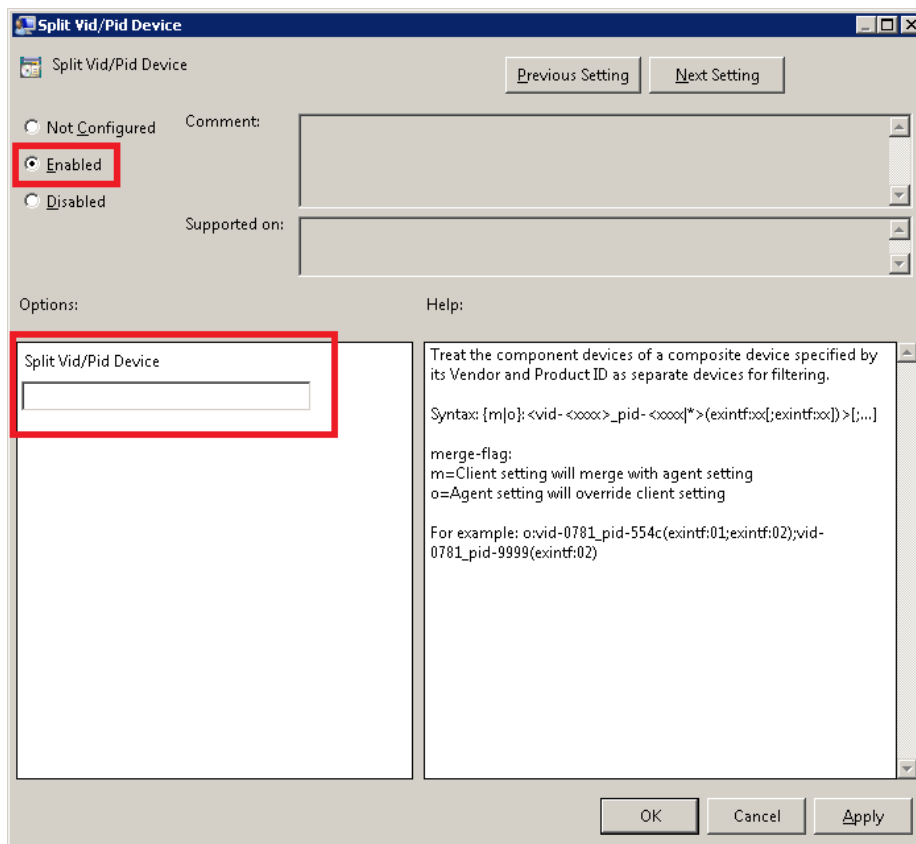
For example, the SpeechMike Premium devices requires the following entry:

o:vid-0911_pid-0c1c

- Open the group policy, go to ... / **Vmware View Agent Configuration / View USB Configuration / Client Downloadable only Settings** and double click **Split Vid/Pid Device**



- Select **Enabled** and enter the according values into the **Split Vid/Pid Device** field (for details see [chapter 6.3 VMware View USB Configuration](#)) and click OK.



For example, the SpeechMike Premium devices requires the following entry:

o:vid-0911_pid-0c1c(exintf:00;exintf:01;exintf:02;exintf:03)

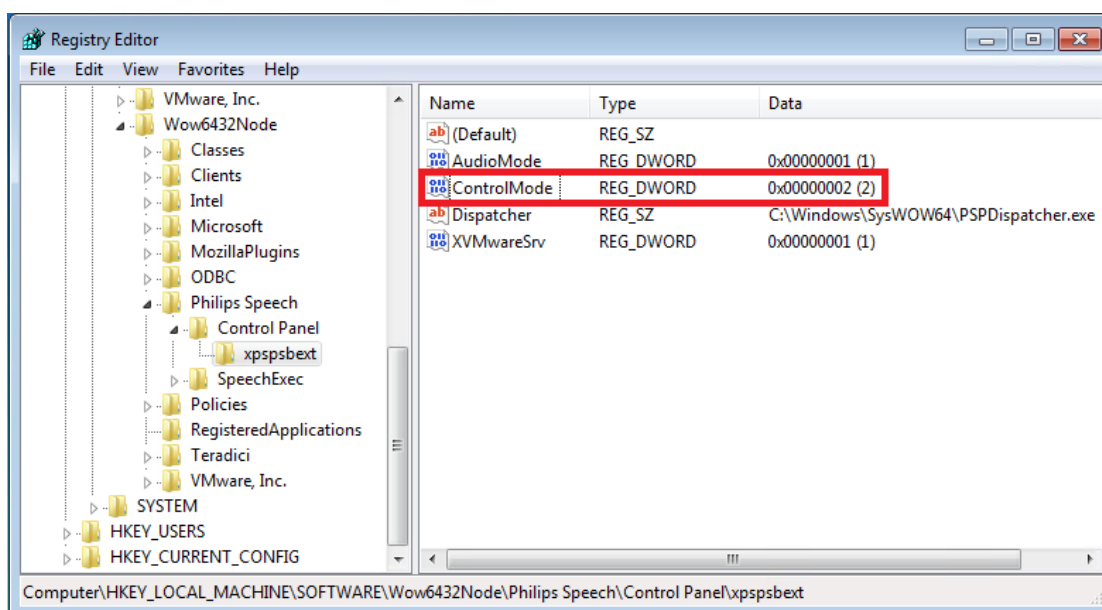
6. Install the Philips Speech Extension Drivers for VMware Horizon View on client and target side as described in chapter [Windows Server / Virtual Desktop and Client Driver Setup](#).
7. On the virtual desktop, open the registry editor and go to

HKEY_LOCAL_MACHINE\SOFTWARE\Philips Speech\Control Panel\Xpspsbext

or

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Philips Speech\Control Panel\Xpspsbext

and change the value of „**ControlMode**” to „**2**”.

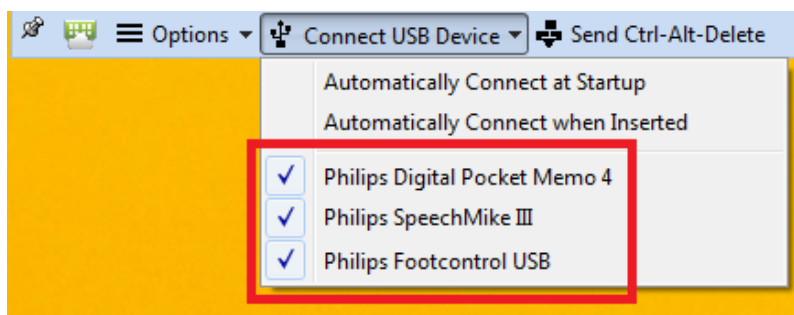


Note: value „1” forces the dictation software to use the Philips extension drivers while value „2” disables the extensions so the native USB redirection functionality will be used.

AudioMode = setting for the audio extensions (playback/recording)

ControlMode = setting for the control extensions (button events)

8. Select all Philips devices dictation appearing in the Connect USB Device drop down menu in VMware Horizon client:



Now the devices appear as “local” devices in the virtual machine, but audio is still using the Philips audio channels to guarantee excellent audio recording and playback quality.

Note: in our tests we have seen issues when “Automatically Connect when Inserted” was enabled in the VMware Horizon client. Philips doesn’t have any influence on the USB redirection functionality of VMware View, therefore we recommend to select the devices manually in the “Connect USB Device” dropdown menu of the VMware Horizon View client.

6.4. VMware View USB configuration

As Philips SpeechMike and Foot Control device redirection is not enabled by default in VMware Horizon View, it is required to modify the according redirection rules in the VMware View Agent configuration policy:

Series	LFH	Include Vid/Pid Dev.*	Split Vid/Pid Dev.**
SpeechMike Air	3000, 3010, 3020	o:vid-0911_pid-0bb8	o:vid-0911_pid-0bb8(exintf:00;exintf:01;exintf:02;exintf:03)
SpeechMike III Pure	3100, 3110, 3120	o:vid-0911_pid-0c1c	o:vid-0911_pid-0c1c(exintf:00;exintf:01;exintf:02;exintf:03)
SpeechMike III Plus	3200, 3210, 3220		
SpeechMike III BC	3300, 3310, 3320		
SpeechMike Prem.	3500, 3510, 3520		
SpeechMike Prem. BC	3600, 3610		
Foot Control 3 Buttons	2310, 2320	o:vid-0911_pid-1844	-
Foot Control 4 Buttons	2330	o:vid-0911_pid-091a	-

* Adding the SpeechMike / Foot Control IDs to the „Include Vid/Pid Device” configuration allows to redirect these devices using native VMware Horizon View USB redirection. Otherwise the devices would just not be visible in the „Connect USB Device” drop down menu on the VMware Horizon client.

** The „Split Vid/Pid Device” policy settings exclude the SpeechMike audio- and mouse- interfaces (00, 01, 02, 03) from being redirected to the virtual desktop.

7. Trouble shooting Linux

The following components have to be installed on Linux clients.

Binary	Path	Control/ DPM	Audio	Mixer	Description
DPMMountd	bin	X			DPMMounter daemon
libCtxHIDManagaerRemote.so	lib	X			Control channel lib
libCtxMixerAlsa.so	lib			X	Mixer lib
libCtxSbExtAlsa.so	lib		X		Sound lib
libpsqp.so	syslib		X		QP library
libpspusb.so	syslib	X	X	X	Philips USB lib
VDPSPAUD.dll	ICA client		X		Citix VirtualDriver for Audio
VDPSPHID.dll	ICA client	X			Citix VirtualDriver for Control
VDPSPMIX.dll	ICA client			X	Citix VirtualDriver for Mixer
PSPDeviceTest	bin				libpspusb test tool
PSPDiag	bin				simplefied test tool for pspusblb
PSPDPMEventMonitor	bin				DPMMountd test tool

Path details:

bin: standard bin directory (/usr/bin/)
lib: same as LIB_DIR setting in module.ini, or in standard lib directory
syslib: standard lib directory (/usr/lib/)
ICA client: base directory of Citrix ICA client (/usr/lib/ICAClient)

Module.ini in ICA client dir/config/

[PSPHID]	Control	
LIB_DIR=/usr/lib/ICAClient	Control	directory where libCtxHIDManagerRemote.so is located
LIB_NAME=libCtxSpmike.so	Control	
DriverName = VDPSPHID.dll	Control	
[SpeechMikeAudio]	Audio	
DriverName = VDPSPAUD.dll	Audio	
LIB_DIR=/usr/lib/ICAClient	Audio	directory where libCtxSbExt.so is located
LIB_NAME=libCtxSbExtAlsa.so	Audio	
LIB_NAME=libCtxSbExt.so	Audio	
FORCE_PCM=0	Audio	Disable(1) or enable(0-default) ds2 codec. Use this on computers with slow CPU
[SpeechMikeMixer]	Mixer	
DriverName = VDPSPMIX.dll	Mixer	
LIB_DIR=/usr/lib/ICAClient	Mixer	directory where libCtxMixer.so is located
LIB_NAME=libCtxMixerAlsa.so	Mixer	

Logging:

Warning: Enabling logging can extremely slow down performance and can cause the system to hang.

ini file	path	module
pspusblb.ini	current working directory	libpspusblb
pspaud.ini	current working directory	citrix audio
psphid.ini	current working directory	citrix control
pspmix.ini	current working directory	citrix mixer

current working directory = the directory where you start the application from

Example (psphid.ini):

```
# Enable or Disable
Enable=y
# Filename for LOG file
FileName=./psphid.log
# enable/disable log function entries/exits
LogFunction=y
# enable/disable log variables
LogVariable=y
# enable/disable log comments
LogComment=y
# enable/disable log events
LogEvent=y
# enable/disable log errors
LogError=y
```

8. Trouble shooting Windows

The following components should be installed by PhilipsSpeechDriversSetup.exe:

					SpeechExec Enterprise			
					SpeechExec SDK			
					SmExAudio			DPMCtrl
Binary	Path	Local	Client	Server	Control	Audio	Mixer	DPM
PSPDispatcher.exe	SYSTEM 32 bit always			X	X			X
XMCI P SPCT.dll	SYSTEM	X	X	X	X			
XMCI P SPA.dll	SYSTEM	X	X	X		X		
XPSPACIn.dll	ICA Client		X			CTX		
XPSPAPDRV.dll	SYSTEM	X	X	X		X		
XPSPAUDRV.dll	SYSTEM	X	X	X		X		
DPMMounterSvc.exe	SYSTEM		X					X
XPSPDDI.dll	SYSTEM	X	X	X		X		
XPSPDSS.dll	SYSTEM	X	X	X		X		
XPSPFIDRV.dll	SYSTEM	X	X	X		X		
XPSPLOG.dll	SYSTEM	X	X	X	X	X	X	X
XPSPMCIn.dll	ICA Client		X				CTX	
XPSPMP3.dll	SYSTEM	X	X	X		X		
XPSPSBEXT.dll	SYSTEM	X	X			X		
XPSPNCIn.dll	ICA Client		X		CTX			X
XPSPSBEXTCtxSrv.dll	SYSTEM			X		CTX		
XPSPWAVE.dll	SYSTEM	X	X	X		X		
XPSPWMA.dll	SYSTEM	X	X	X		X		
smcelp32.acm	SYSTEM	X	X	X		X		
XPSPSBEXTVMWareHorizonSrv.dll	SYSTEM			X	V	V	V	V
XPSPSbExtWtsCInt.dll	SYSTEM		X			W/V		
XPspSbExtWtsSrv.dll	SYSTEM			X		W		
XSpMikeCtxSrv.dll	SYSTEM			X	G5			
PSPWTSControlClient.dll	SYSTEM		X		W/V			
XPSPMixerWtsCInt.dll	SYSTEM		X				W/V	
XSpMikeWtsSrv.dll	SYSTEM			X	W			
XPSPCCIn.dll	ICA Client		X		G5			

Remarks:

SYSTEM: System32 or SysWOW64

CTX: In case Citrix is used

W: In case WTS/RDS is used

V: In case VMware is used

G5: In case of 32 bit and Citrix the SpMikeCtrl.dll is compatible with the G5 Control client (32 bit SpeechMike SDK only)

ICA Client: The folder of the Citrix client, where the module.ini is, usually C:\Program Files (x86)\Citrix\ICA Client

On client machines DPMM

ounterSvc.exe should run as a windows service if DPM redirection is needed

Each component except xpsplog can log using an appropriate <component>.ini located in the same folder. E.g.: XMCIPSPCT.ini

Warning: Enabling logging can extremely slow down performance and can cause the system to hang.

Citrix client components are registered in:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ICA

Client\Engine\Configuration\Advanced\Modules\ICA 3.0\VirtualDriverEx

MCI registry settings for all installations

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\MCI32

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Microsoft\Windows NT\

CurrentVersion\MCI32

Name	Data	Remark
Xdictaudio	xmcipspwa.dll	
XDictCtrl	XDictCtrlAlias	
XDictCtrlAlias	xmcipspct.dll	
XDictCtrlSrv	xmcipspct.dll	

9. Appendix

9.1. Installation Desktop Experience

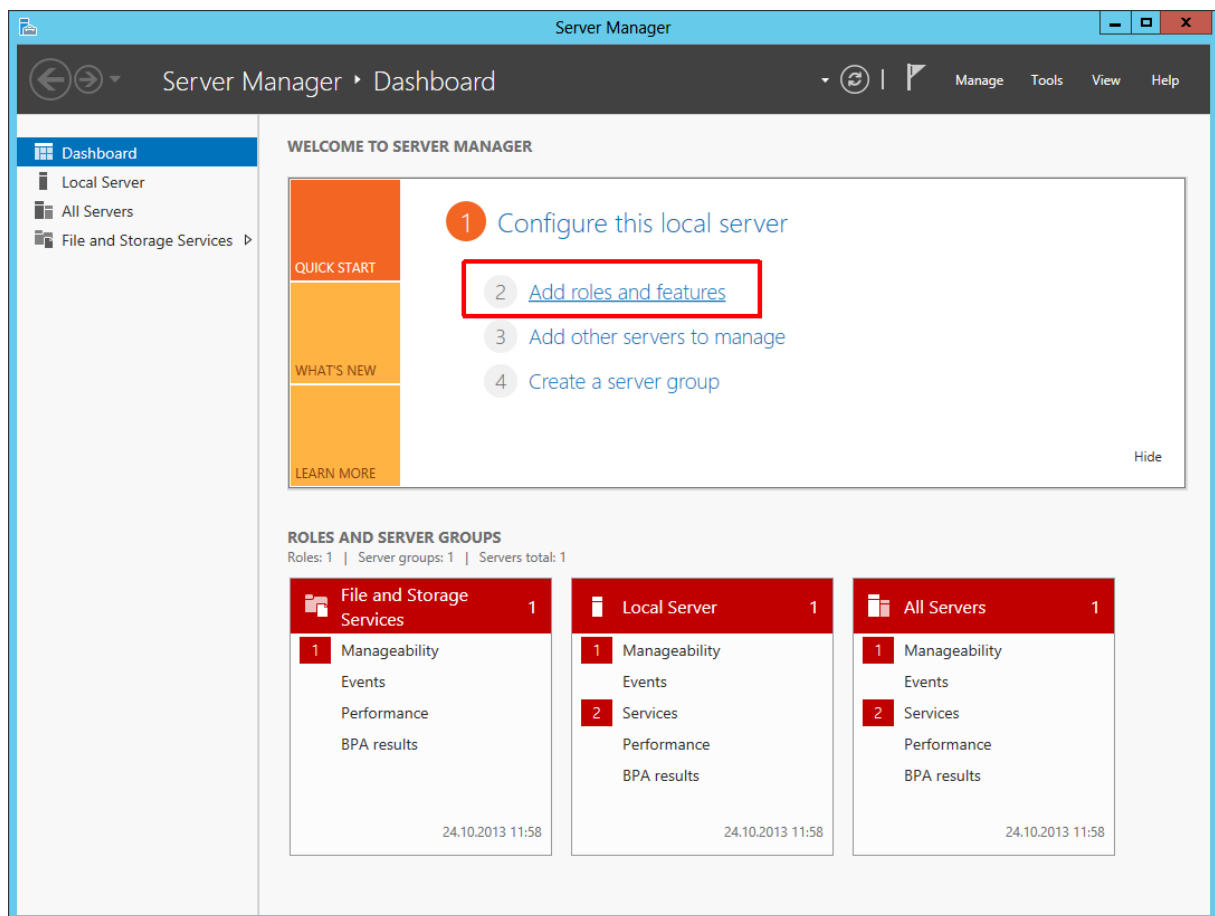
If your server operating system is Windows Server 2008R2 or Server 2012R2, it is required to enable the Desktop Experience feature on your Windows server.

9.1.1. Microsoft Windows Server 2012R2

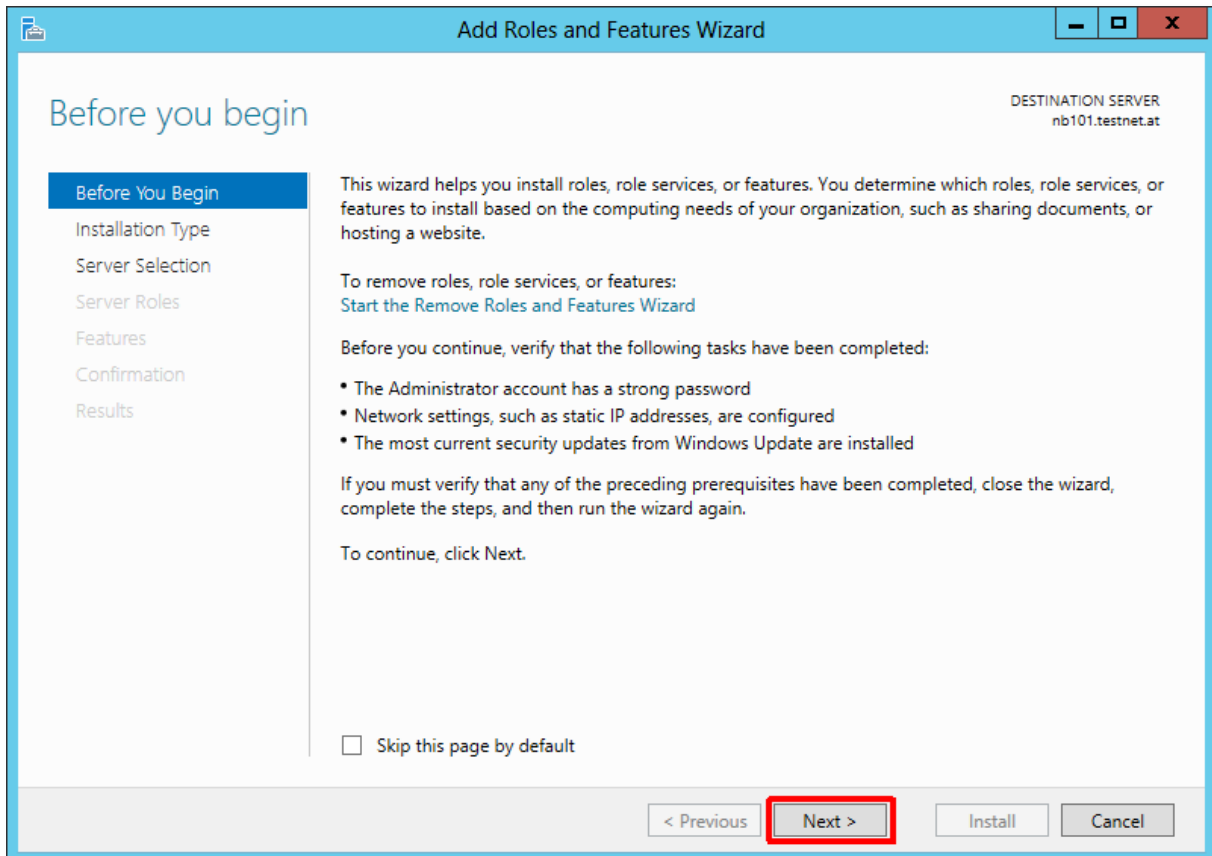
NOTE:

The Server needs to be restarted after the installation completes.

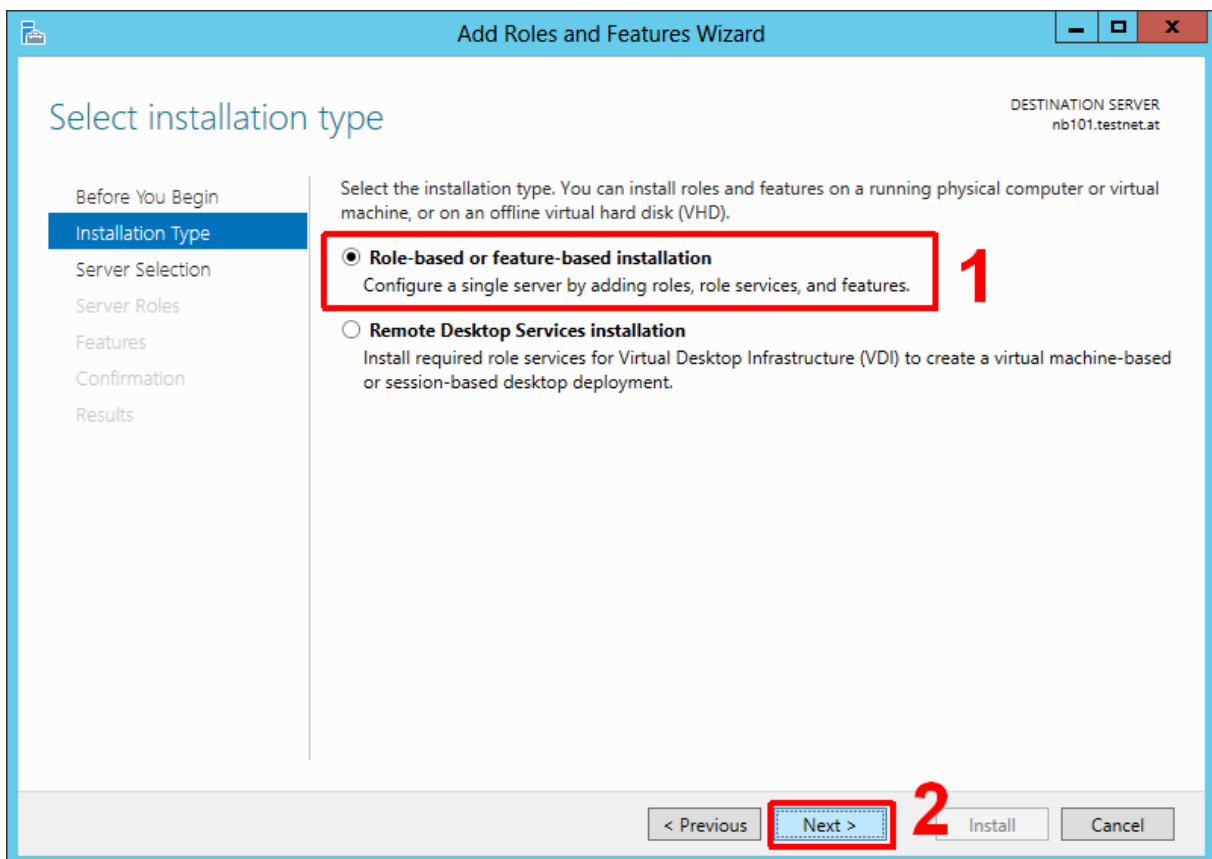
In the **Server manager**, select the 2nd option – **Add roles and features**



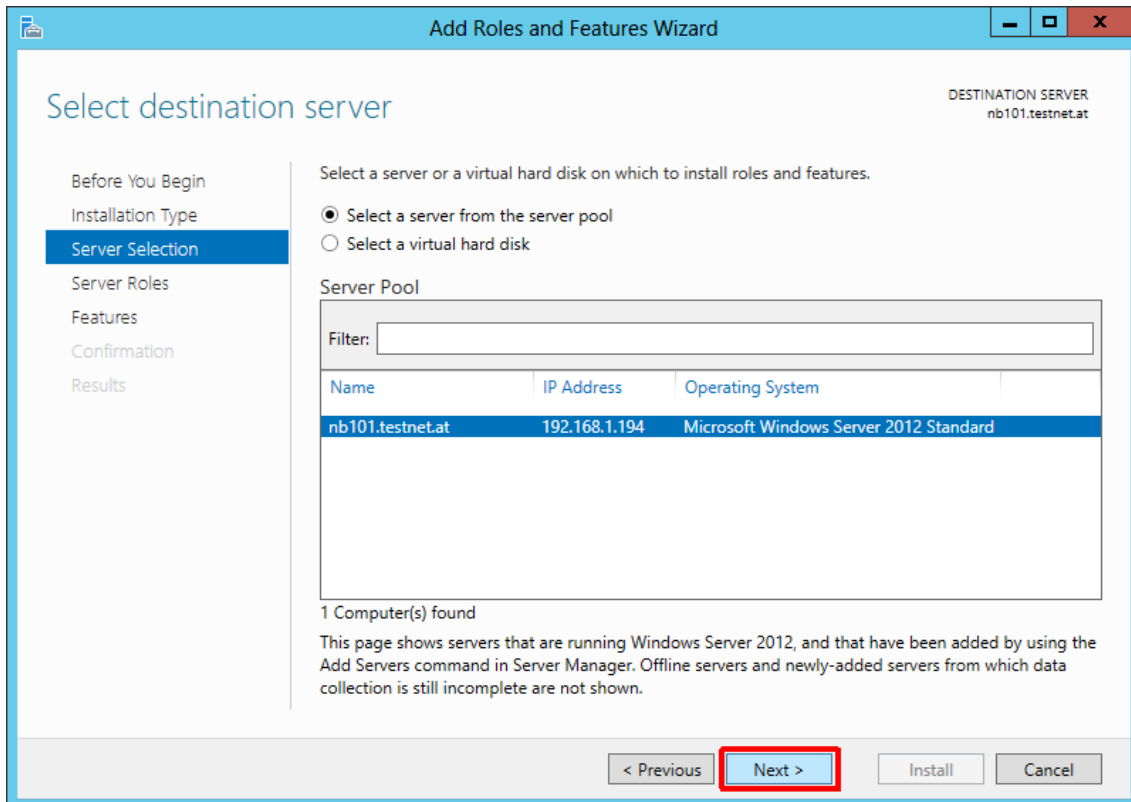
Click on **Next**



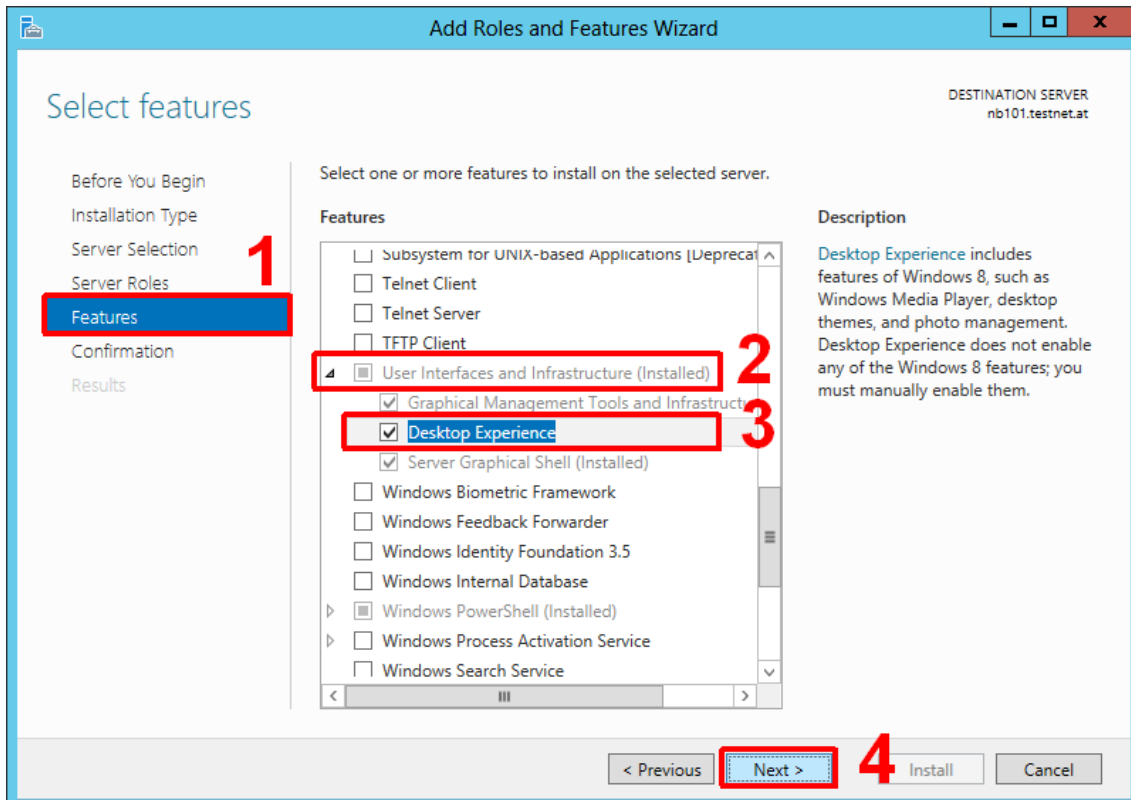
Select the first option [1] – **Role-based or feature-based installation** and click **Next** [2]



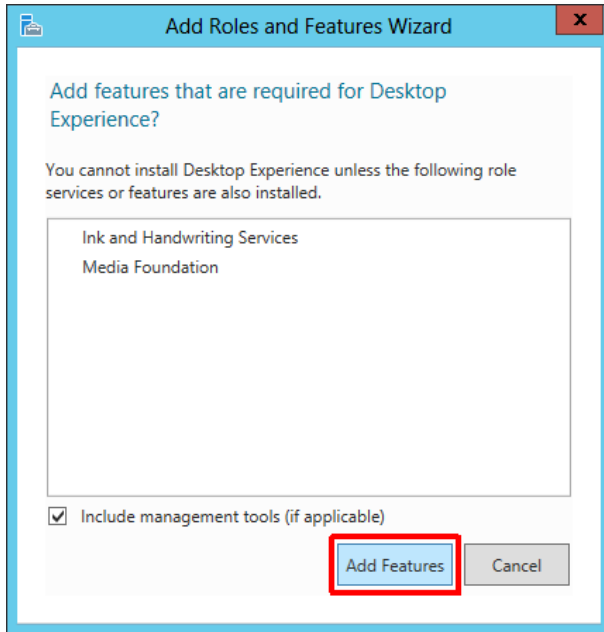
Click **Next**



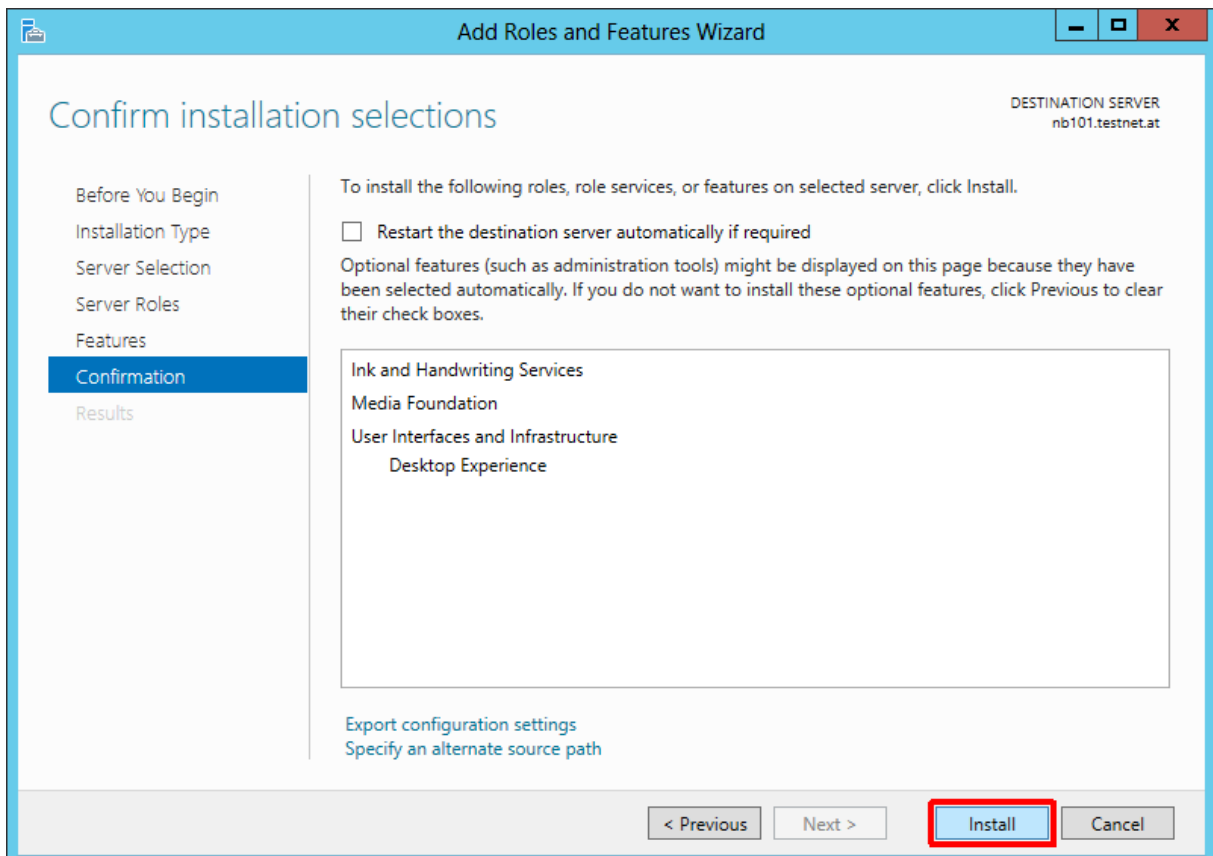
On the **Features** menu [1] select the – **User Interfaces and Infrastructure (installed)**[2] and activate **Desktop Experience** [3] and click finally click on **Next** [4]



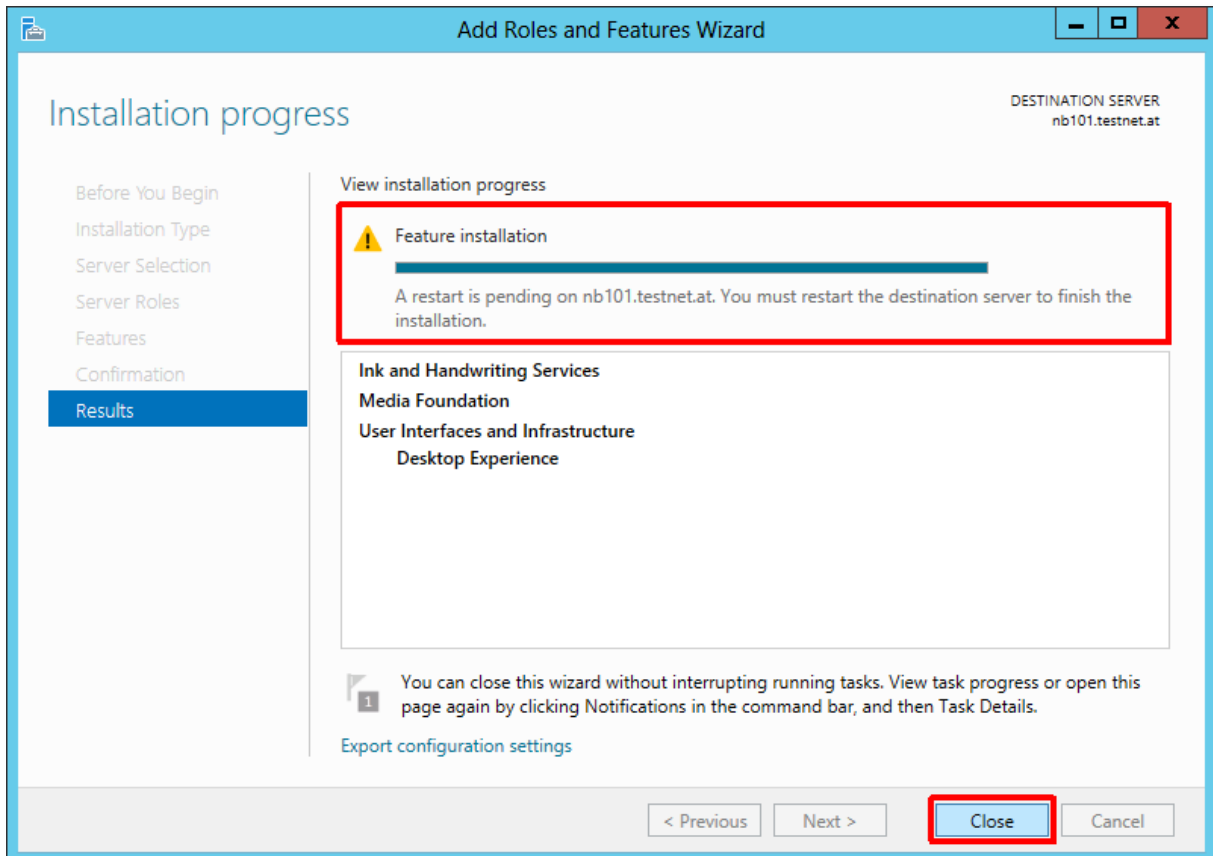
Required components will be installed – click **Add Features**



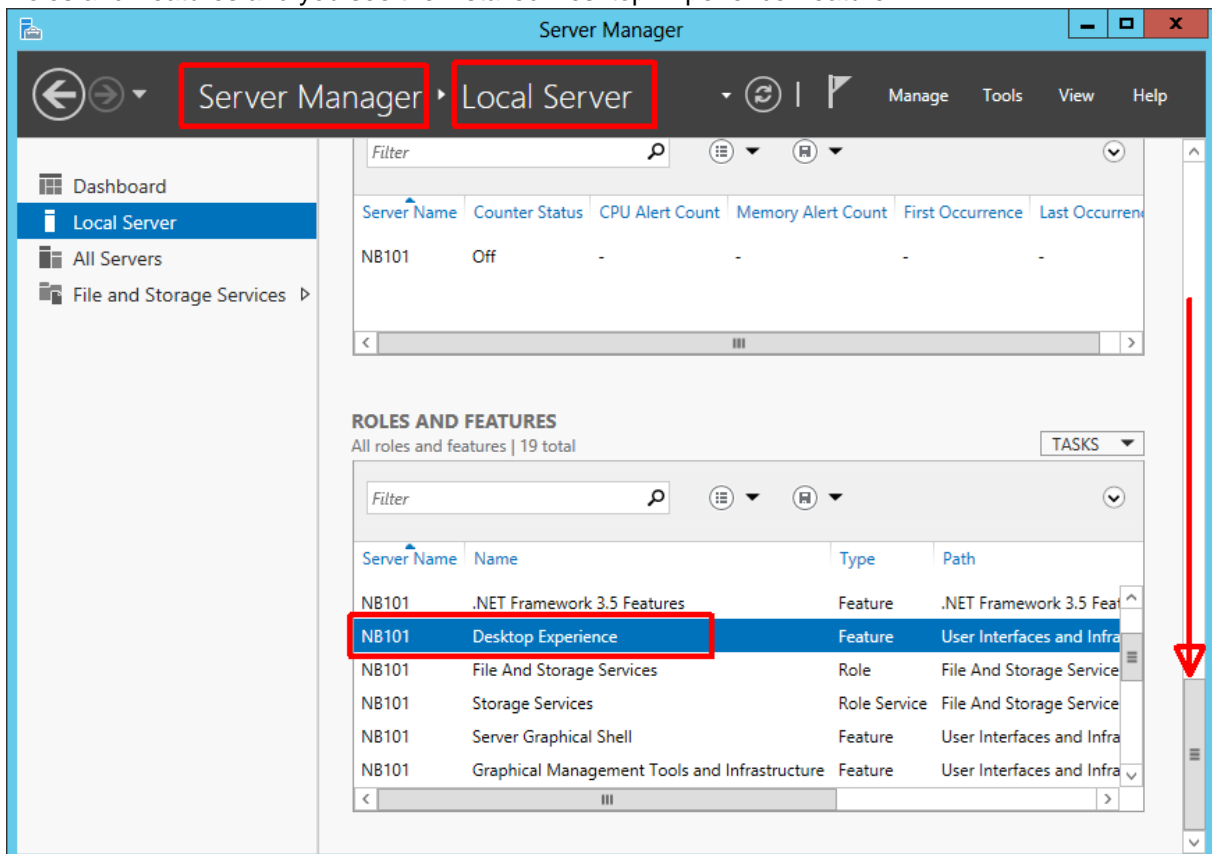
Finally click on **Install**



Installation is ready, click **Close** and **restart** your server.



After Restart please check the Installation – go to Server Manager, open Local Server, scroll down to Roles and Features and you see the installed Desktop Experience Feature.



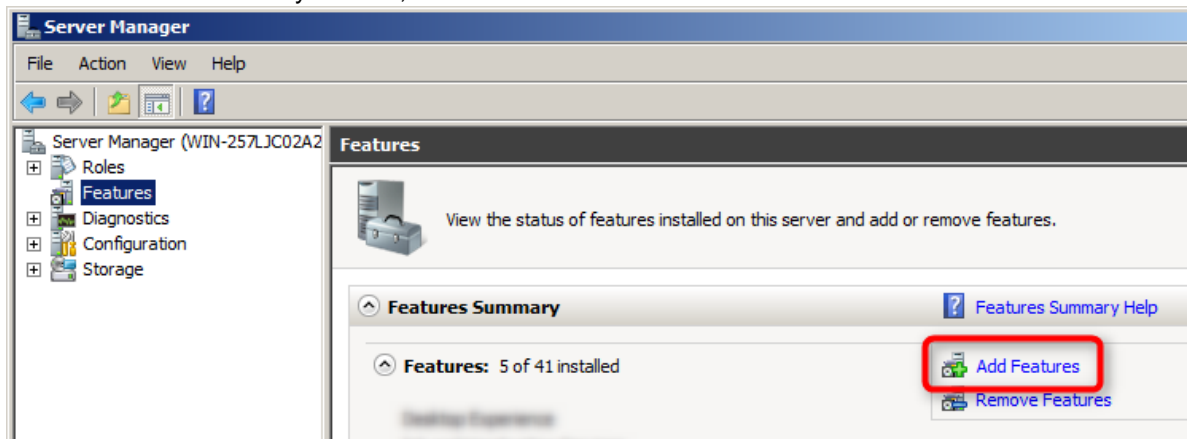
9.1.2. Microsoft Windows Server 2008R2

NOTE:

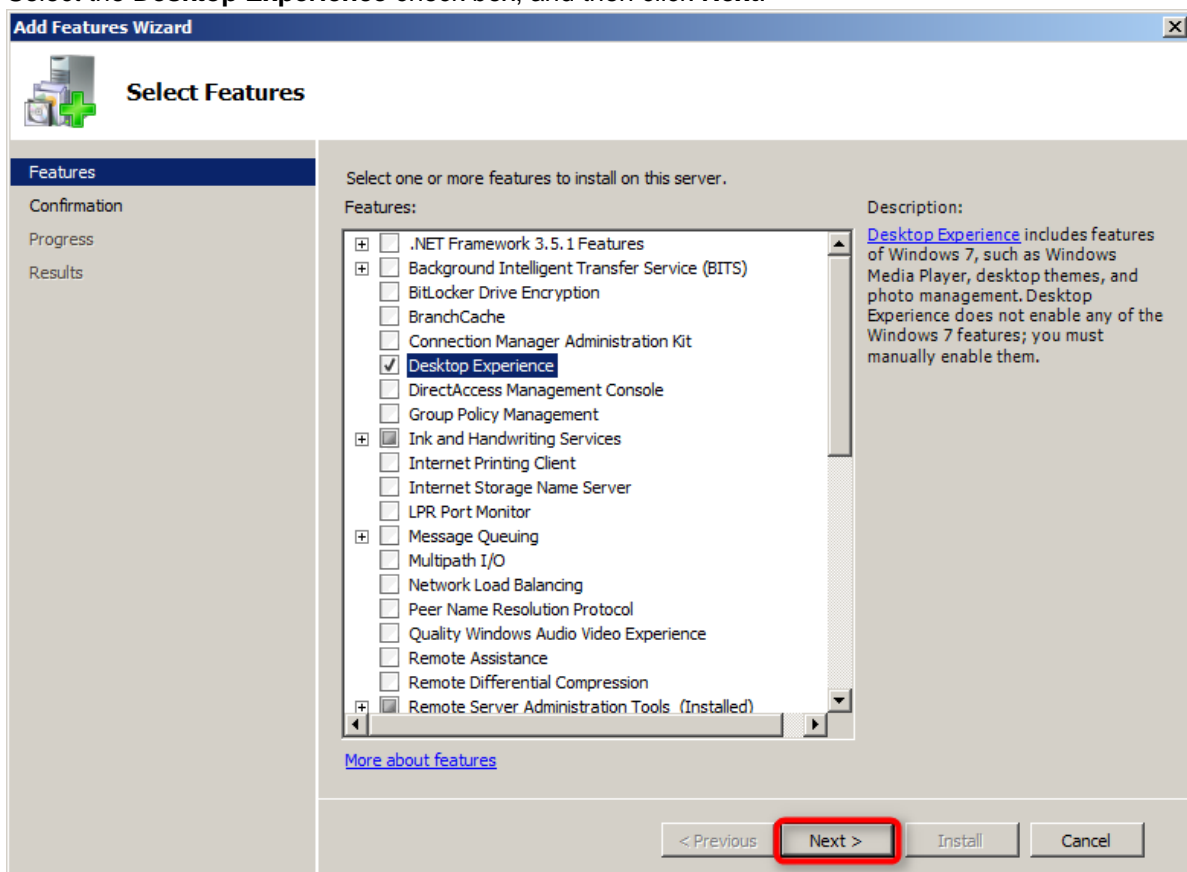
The Server needs to be restarted after the installation completes.

Open **Server Manager**: click **Start**, point to **Administrative Tools**, and click **Server Manager**.

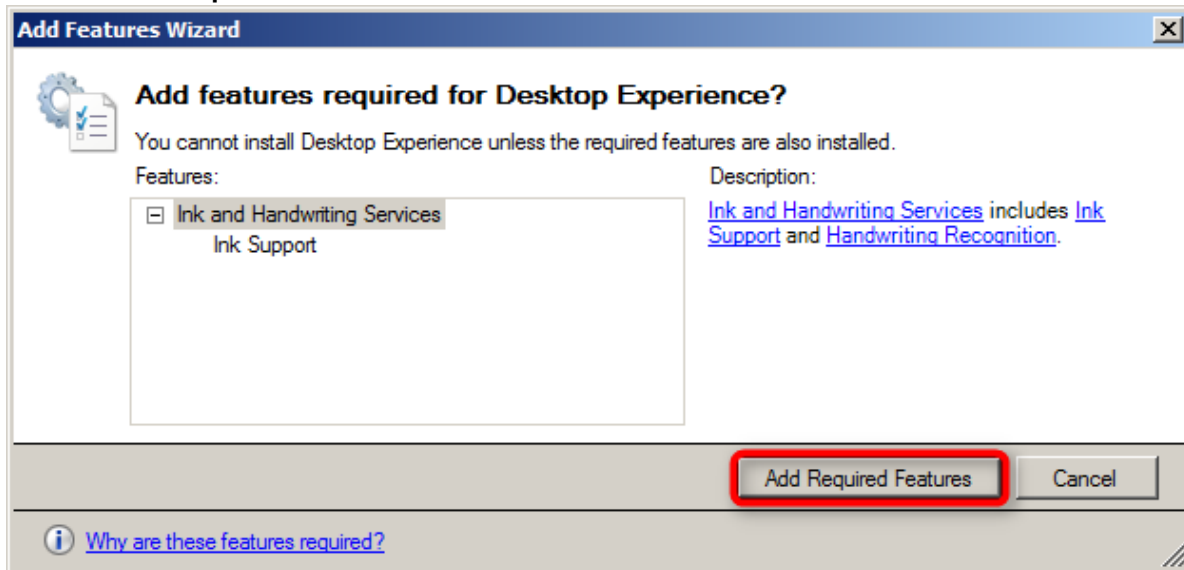
In the Features Summary section, click **Add Features**.



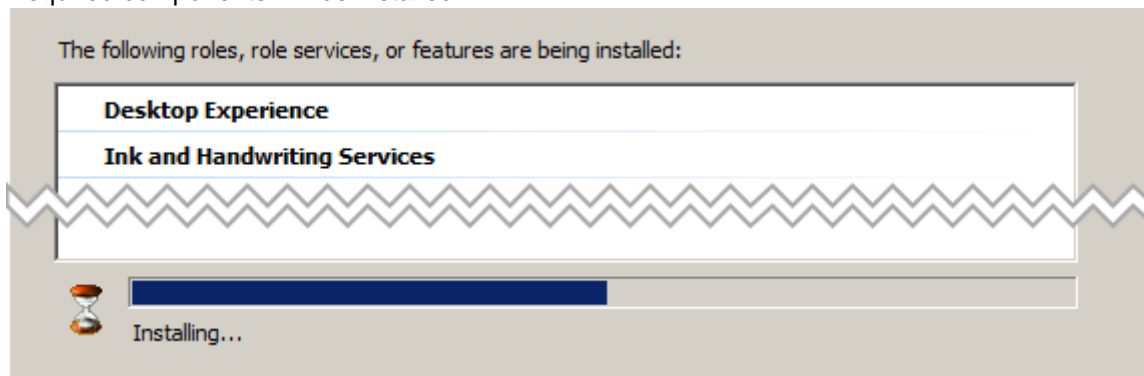
Select the **Desktop Experience** check box, and then click **Next**.



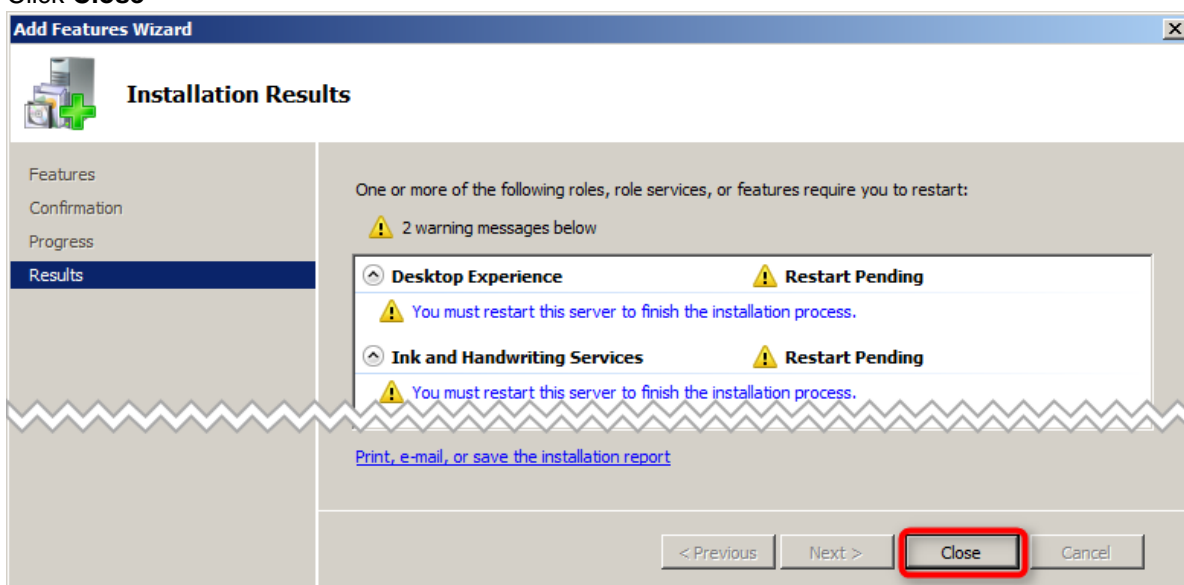
Click on **Add Required Features**



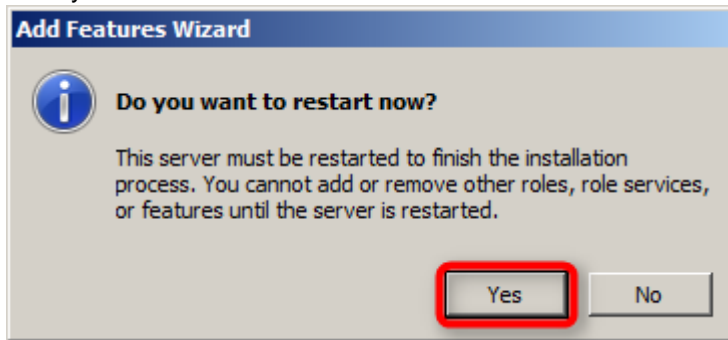
Required components will be installed.



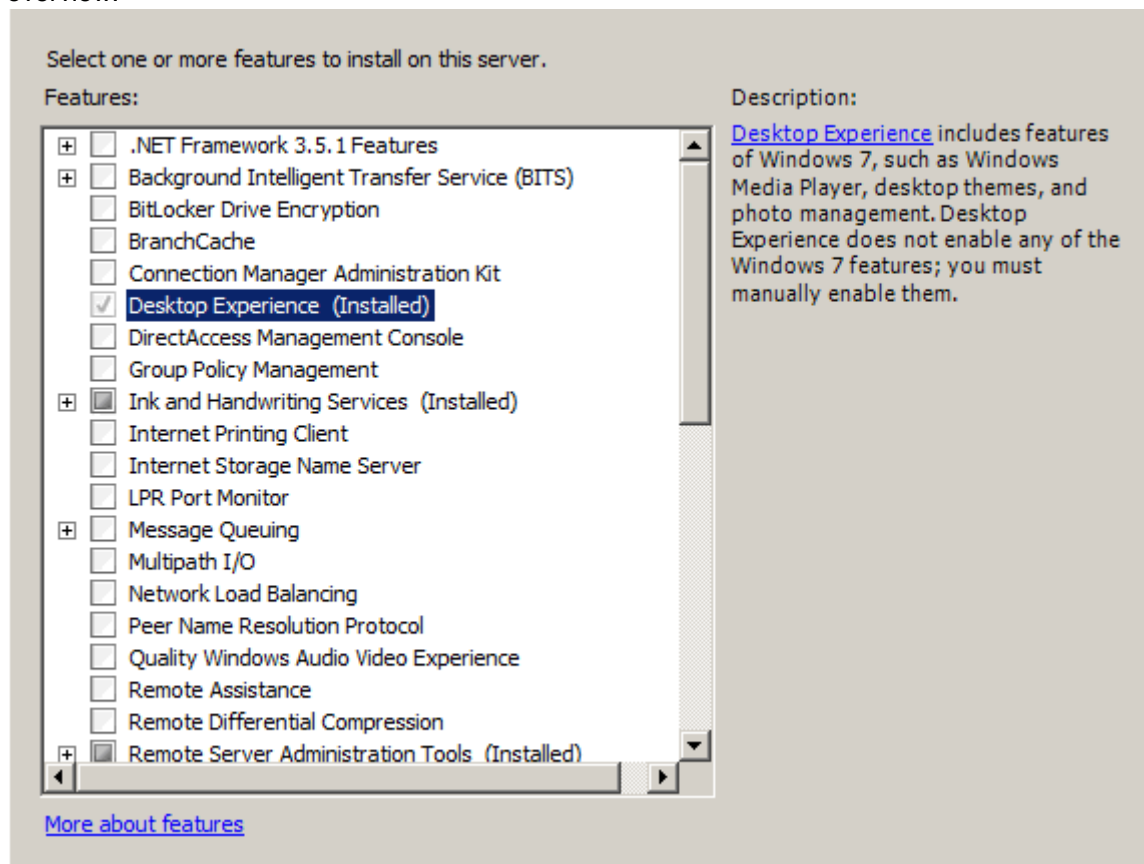
Click **Close**



Finally click on **Yes**



After a **restart** the according Desktop Experience feature is shown as “installed” in the features overview:



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<http://www.philips.com/dictation>

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