

CITRIX[®] XenApp

CITRIX[®] XenDesktop

 **Windows**
Remote Desktop Services

 **Microsoft VDI**

 **vmware**
Horizon View

 **Linux**



PHILIPS SPEECH EXTENSION DRIVERS

GENERATION 12.9

Build No. 4.3.431.29

Technical Documentation
Advanced Configuration

For Certified MDC Partners and Support technicians

PHILIPS

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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 Virtual Apps and Desktops
- 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 III, SpeechMike Premium (Touch) and SpeechMike Premium Air, Foot Control, Digital Pocket Memo 8000, AirBridge, SpeechAir and SpeechOne series.

If you want to upgrade from a previous version, please follow this upgrade path to ensure trouble free operation:

- 1) Upgrade all Windows and Linux based thin clients to the new version
- 2) After you are done with the client upgrades, update the **dictation software** and **extension drivers on the server(s)** or virtual desktops to the new version

Note: the dictation software on the server and the server drivers have to be updated simultaneously.

The new server extension drivers are compatible with the previous version of the client extension drivers, however, new functions are only available if both, clients and server, have been updated to the latest version.

2.1. What's new?

G12.9 (4.3.431.29):

- Faster and more reliable remote session connection status check to avoid delays in case no extensions are installed on the client
- Shutdown of the PSPDispatcher.exe if it's not in use anymore
- Support of the NComputing RX-HDX Citrix thin client (except for Philips PocketMemo)
- Support of Windows Virtual Desktop (if connected from a Windows client)

G12.8 (4.3.430.08):

- Support of the new Revision2 SpeechMike3 and Revision2 SpeechMike Premium

G12.7 (4.2.420.06):

- Support of the new AirBridge ACC4100
- Support of Windows Server 2019
- Support of the latest versions of VDI platforms
 - Citrix Virtual Apps and Desktops 7 1808
 - VMware Horizon 7.7.0
- Support of HP ThinPro 7

G12.6.1 (4.1.410.31):

- Support of eLux RP 6.3 (64-bit)
- Linux drivers: SpeechOne bugfix
- Resolved issue in the SDKs

G12.6 (4.1.410.19):

- Support of the new SpeechOne 6000 series (SpeechExec Enterprise v6.1 or higher is required)
- Support of the new SpeechAir 2000 series (SpeechExec Enterprise v6.1 or higher is required)
- Support of the latest versions of VDI platforms
 - Citrix XenApp / XenDesktop 7.18
 - VMware Horizon 7.5.0
- Support of Windows 10 IoT Enterprise (64-bit)

G12.5 (4.0.400.22):

- Resolved compatibility issue with SpeechMike firmware version <2.13

G12.5 (4.0.400.20):

- Support of the new SpeechMike Premium Air
- Support of Igel Linux 10 (64-bit)
- Extended 64-bit setup for the new native 64-bit version of VMware Horizon Client (v4.3.0 or higher)
- Support of
 - Citrix XenApp / XenDesktop 7.14.1
 - VMware Horizon 7.1

G12.4 (3.8.380.14):

- Update 03/2017:
 - Support of Windows Server 2016
 - Support of XenApp / XenDesktop 7.12
- Support of new Philips dictation hardware:
 - SpeechMike Premium Touch series
 - SpeechAir PSP1100 series
 - Foot Control ACC2300 series
- Support of Windows 10 (64-bit)
- Support of XenApp / XenDesktop 7.11
- Support of VMware Horizon RDSH:
 - VMware Server Extensions now can also be installed on Windows Server operating systems
 - DPM/SpeechAir folder mapping is now also supported for VMware Horizon
- The content of all mobile dictation devices (DPM and SpeechAir) are now mounted to C:\SPSMOUNT\
- Support of eLux RP5
- RDP-support on eLux clients
- Support of 3rd party USB audio devices for playback
- Support of IGEL UD3-LX50 thin client
- As Dell/Wyse does not continue maintaining their OS “Wyse enhanced SUSE”, a new G12.4 drivers add-on cannot be provided for this platform

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			
Windows 			
SpeechMike/SpeechOne	Digital Pocket Memo	SpeechAir	Foot Control
Buttons	Buttons	Configuration	Buttons
LED	LED	Firmware Update	Configuration
Audio	Audio	File Handling	
Configuration	Configuration		
Firmware Update	Firmware Update		
	File Handling		
Linux 			
SpeechMike/SpeechOne	Digital Pocket Memo	SpeechAir	Foot Control
Buttons	Buttons	Configuration	Buttons
LED	LED	Firmware Update	Configuration *
Audio	Audio	File Handling	
Configuration	Configuration		
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 2012R2
Windows Server 2016
Windows Server 2019

Citrix
XenApp 6.5
Virtual Apps and Desktops 7

VMware
VMware Horizon 7

Virtual Desktops (Microsoft Remote Desktop / Citrix XenDesktop / VMware Horizon)
Windows 10 (64-bit)

Clients
Windows 10 (64-bit)
Windows 10 IoT Enterprise (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 >=4.3.0

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 folder **\2_LinuxDrivers**

Hardware	Operating System	Version	Driver Folder	Supported Terminal System	Website
HP					
HP t520/t430	HP ThinPro ¹⁾	7	\HP\	Citrix	http://www.hp.com
Igel					
UD3-LX50 UD5-LX50	Igel Universal Desktop (32-bit)	>5.13.110 ⁴⁾	Full integrated	Citrix/WTS	http://www.igel.com
UD3-LX50	Igel Linux 10 (64-bit)	>10.06.190 ⁴⁾			
UD3-LX50	Igel OS 11 (64-bit)	11.04.100			
Stratodesk					
HP t520	noTouch (64-bit)	3.2.10	Full integrated	Citrix/WTS	http://www.stratodesk.com
NComputing RX-HDX	noTouch (ARM) ²⁾	3.2.10	Full integrated	Citrix	
Ubuntu					
Desktop PC	Ubuntu (32/64-bit)	18.04	\Ubuntu\	Citrix	http://www.ubuntu.com
Unicon					
Nextreme-IV	eLux RP5 (32-bit)	5.7.2000	\Unicon\	Citrix/WTS	http://www.myelux.com
Nextreme-IV	eLux RP6 (64-bit)	6.6.0 ³⁾	\Unicon\	Citrix/WTS	http://www.myelux.com

¹⁾ Due to limitations of the HP ThinPro system, SpeechAir is not supported on HP ThinPro

²⁾ Digital PocketMemo is not supported

³⁾ Only the 64-bit version of eLux RP6 is supported (≥ 6.5)

⁴⁾ Please contact Igel support for more information on the release plan

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

2.5. Supported hardware

Device Category	Device Type
SpeechAir	PSP1100 PSP2100
Digital Pocket Memo 4	DPM8000 DPM8200 DPM8500
SpeechOne	PSM6000
SpeechMike Premium Air	SMP4000 SMP4010
SpeechMike Premium Touch	SMP3810 SMP3800 SMP3710 SMP3700
SpeechMike Premium	LFH3610 LFH3600 LFH3520 LFH3510 LFH3500
SpeechMike 3	LFH3310 LFH3300 LFH3220 LFH3210 LFH3200
Foot Control	ACC2330 ACC2320 ACC2310 LFH2330 LFH2320 LFH2310
AirBridge	ACC4100

2.6. 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](#).



2.7. Known issues

2.7.1. 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

2.7.2. 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.

2.7.3. 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:

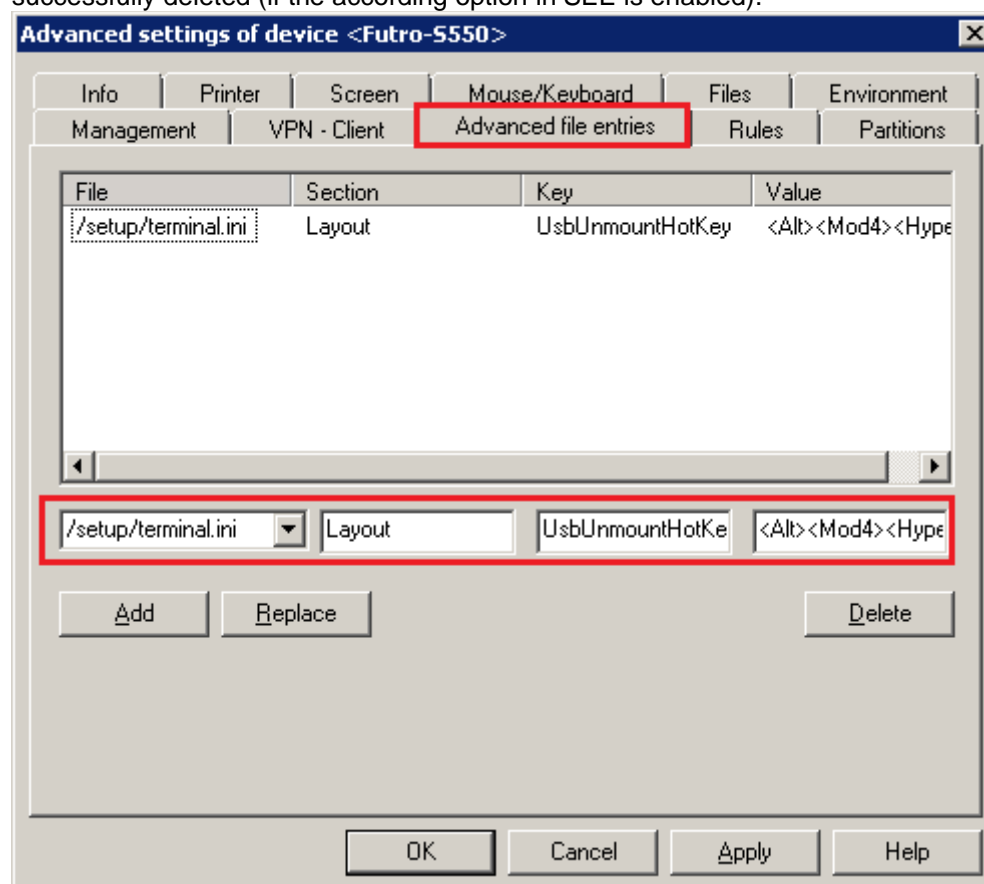
File: /setup/terminal.ini

Section: Layout

Key: UsbUnmountHotKey

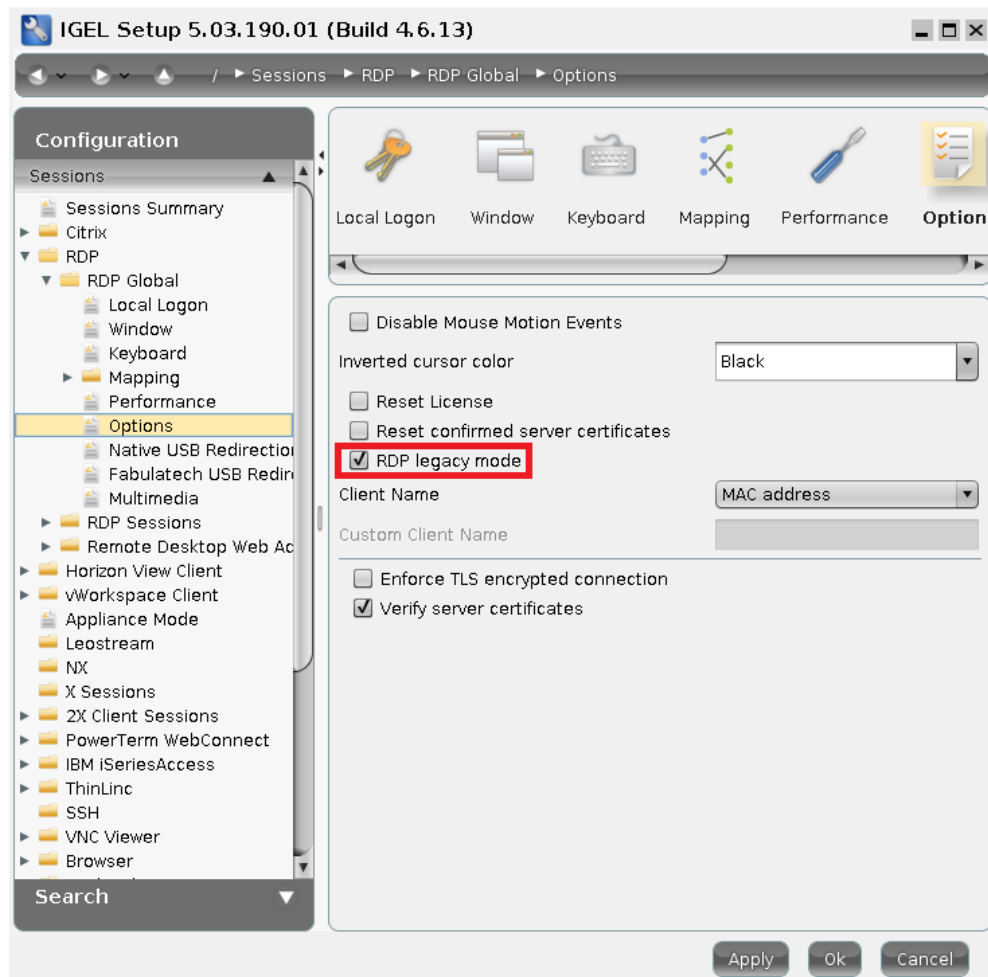
Value: <Alt><Mod4><Hyper>s

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).



2.7.4. 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”.



2.7.5. VMware Horizon View

- Supported protocols are PCoIP and VMware Blast, however, due to a change in the PCoIP protocol, Digital Pocket Memo and SpeechAir are only supported with the VMware Blast protocol.
- SpeechMike/SpeechOne firmware update is currently not supported in a VMware Horizon View environment.
- Using a Digital Pocket Memo device as a USB microphone is currently not supported in a VMware Horizon View environment.
- VMware Horizon requires the built in DPM AutoPlay suppression to be disabled, which can be done with the following registry key, which has to be created on the target server/desktop:

The following registry value will turn off the feature for 32 bit DPMCtrl on 64 bit OS:

```
[HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Philips Speech\DPMCtrl]
"CancelAutoPlay"=dword:00000000
```

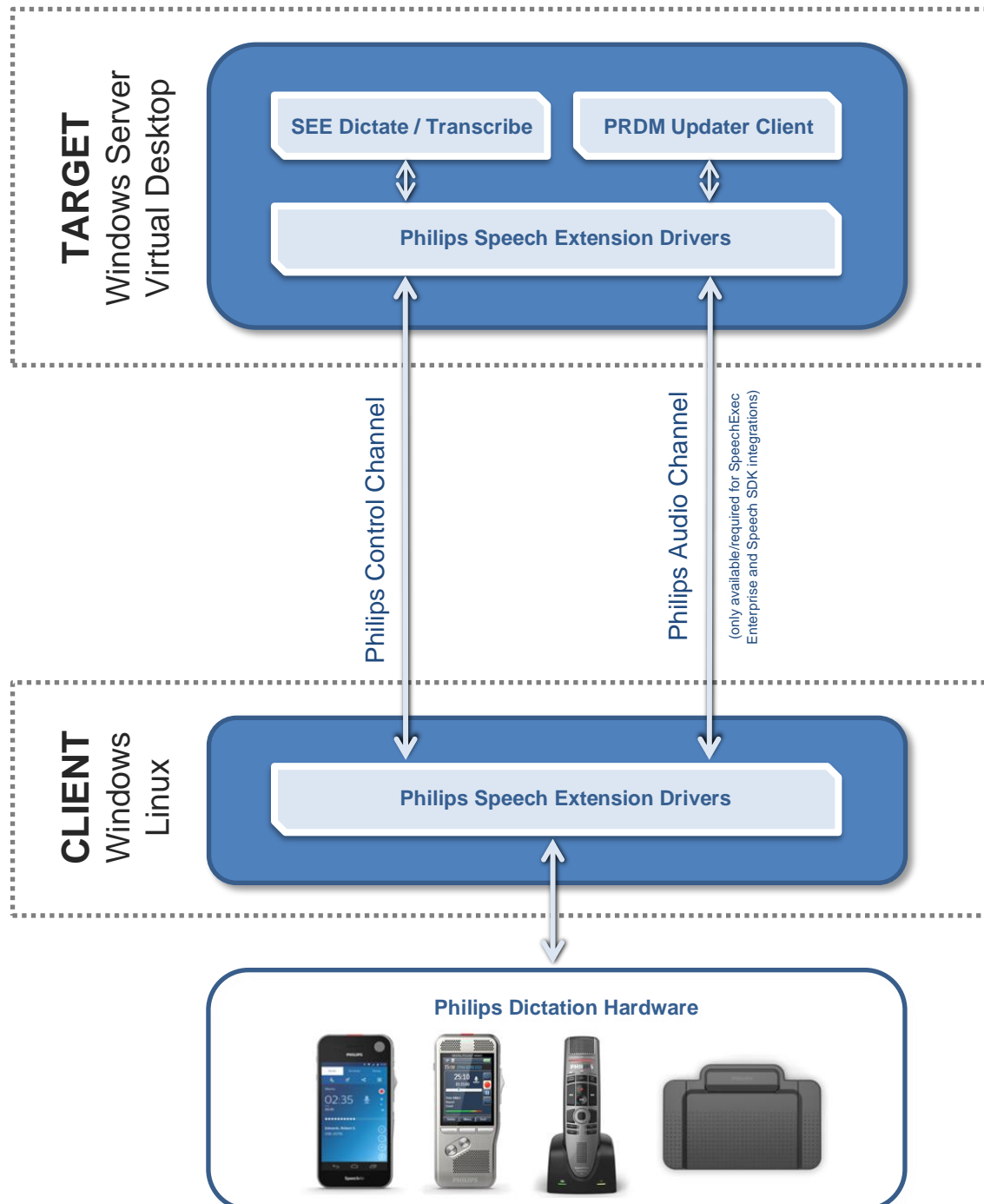
The value can also be created in the HKEY_CURRENT_USER (which has precedence) or in the 64 bit registry if necessary for a 64 bit integration. On 32 bit OS the **WOW6432Node** should be omitted, of course.

2.7.6. 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

Note: The user must be allowed to start the **PSPDispatcher.exe** located in the Windows System folder (32-bit). The dispatcher starts up automatically with the dictation software.

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.

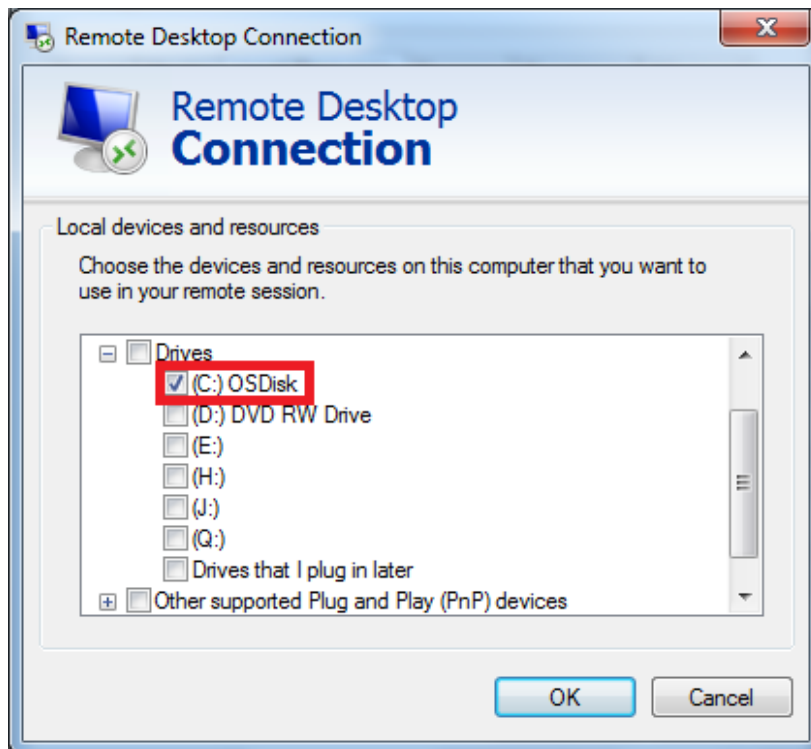
2. For Microsoft WTS/RDS or VMware on Windows 32-bit clients and Citrix on Windows 32- or 64-bit clients run \1_WindowsDrivers\PhilipsSpeechDriversSetup.exe with the according parameters.

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

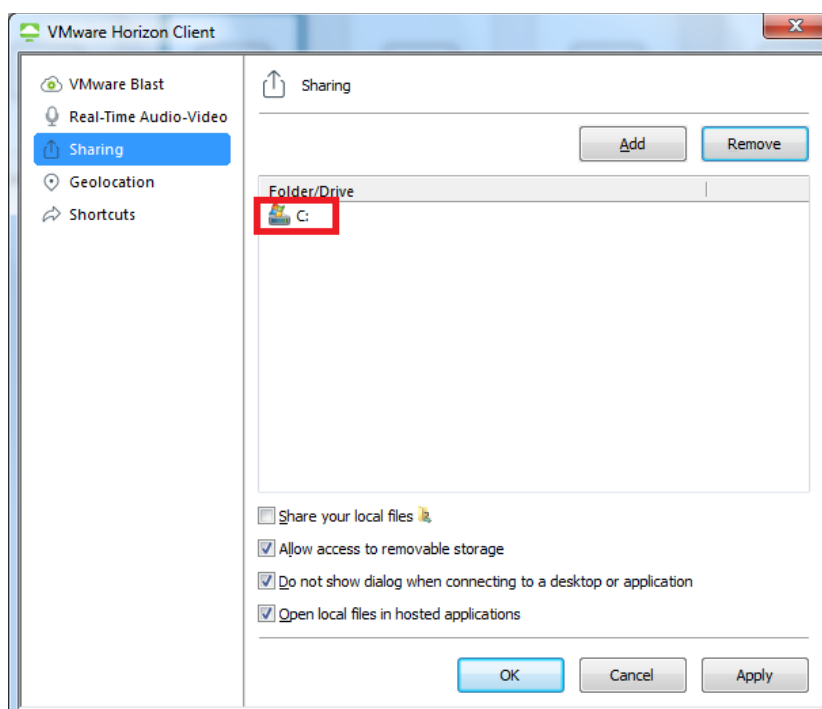
Note: for the Philips dictation devices, USB redirection **must not** be enabled in the remote client software, all communication goes via the Philips channels!

Note: If you want to use DPM or SpeechAir devices in a Microsoft WTS/RDS or VMware environment, please ensure that the local client drive “C” is available in the remote session, the corresponding settings can be found here:

Microsoft Remote Desktop:
“Local Resources” – “More...”



VMware Horizon Client:
“Settings” – “Sharing”



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

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

In a Microsoft WTS / Remote Desktop Services or VMware Horizon 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

Note: the version of the VMware Horizon Client has to be 4.3.0 or higher!

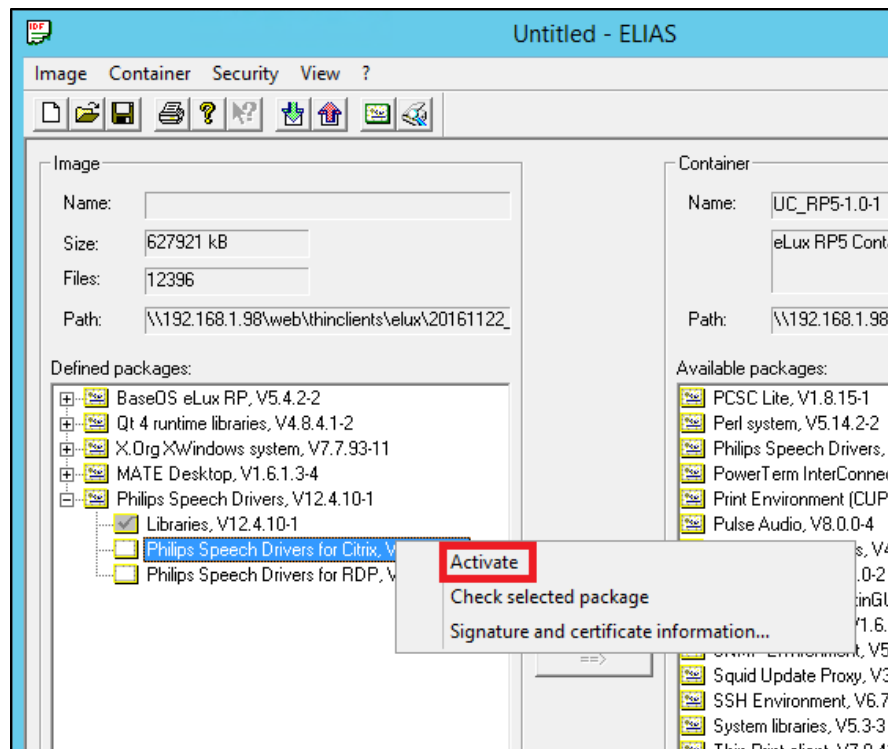
VMware	Server / Virtual Desktop x86	Server / Virtual Desktop x64
Installation SpeechExec Enterprise Dictate/Transcribe <i>and/or</i> RDM Updater Client	\1_WindowsDrivers\ PhilipsSpeechDriversSetup.exe \3_SpeechExecEnterprise_patch\ DPMControl.msi \3_SpeechExecEnterprise_patch\ SmExAudio.msi \3_SpeechExecEnterprise_patch\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

3.3. Installation on Unicon eLux RP clients (Citrix/RDP)

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

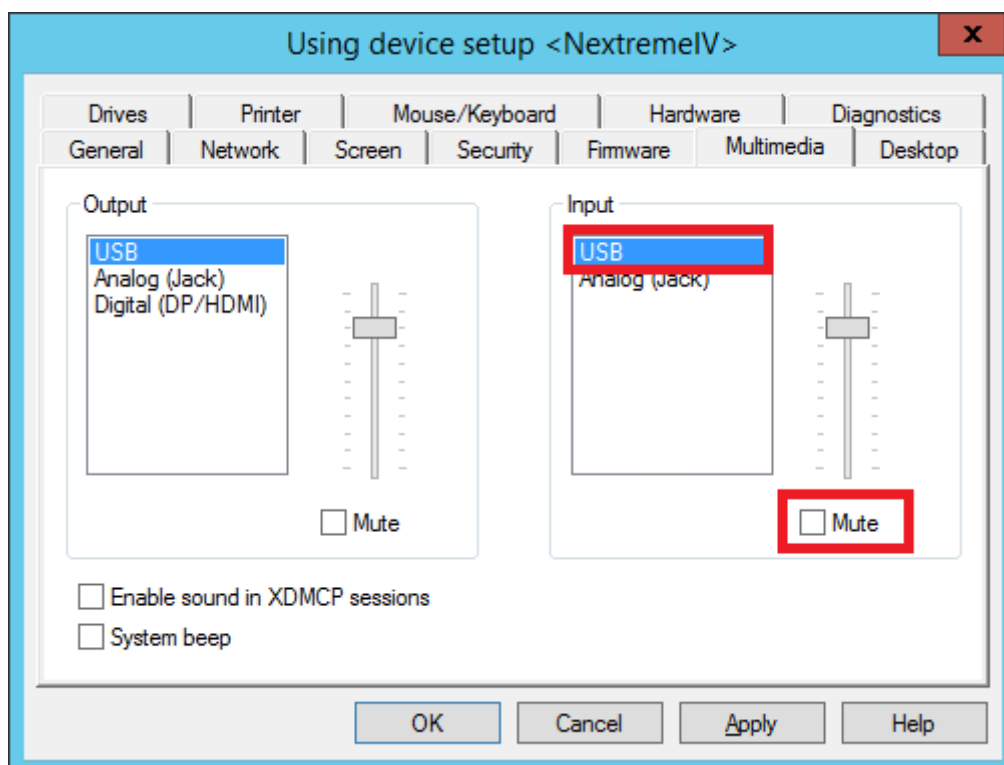
Please remove all older Philips Speech Drivers before installing the new version.

1. Start the ELIAS tool (can be downloaded from www.myelux.com) and create a new image.
2. Import the Philips driver package.
3. Add the Philips driver package to the “Defined packages” area.
4. Right-click and activate the protocol you want to use, all additionally required packages (for example, the ICA client) will be added automatically:



5. Upgrade the thin clients with the new image.

In Scout Enterprise, ensure that Input USB devices are not muted:



3.4. Installation on Ubuntu clients (Citrix/RDP)

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\

Copy the .sh 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  
/opt/Citrix/ICAClient
```

in the terminal.

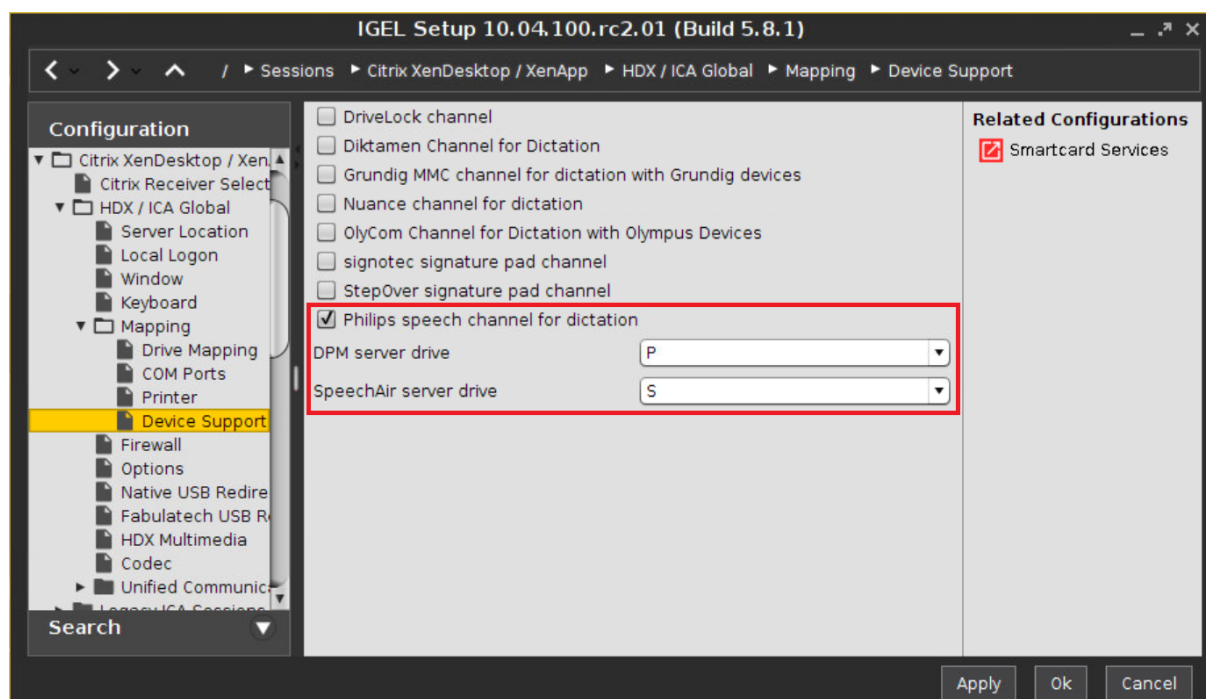
Please note: this script was prepared for Ubuntu 18.04, it might have problems on other versions.

3.5. Installation on Igel Universal Desktop clients (Citrix/RDP)

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

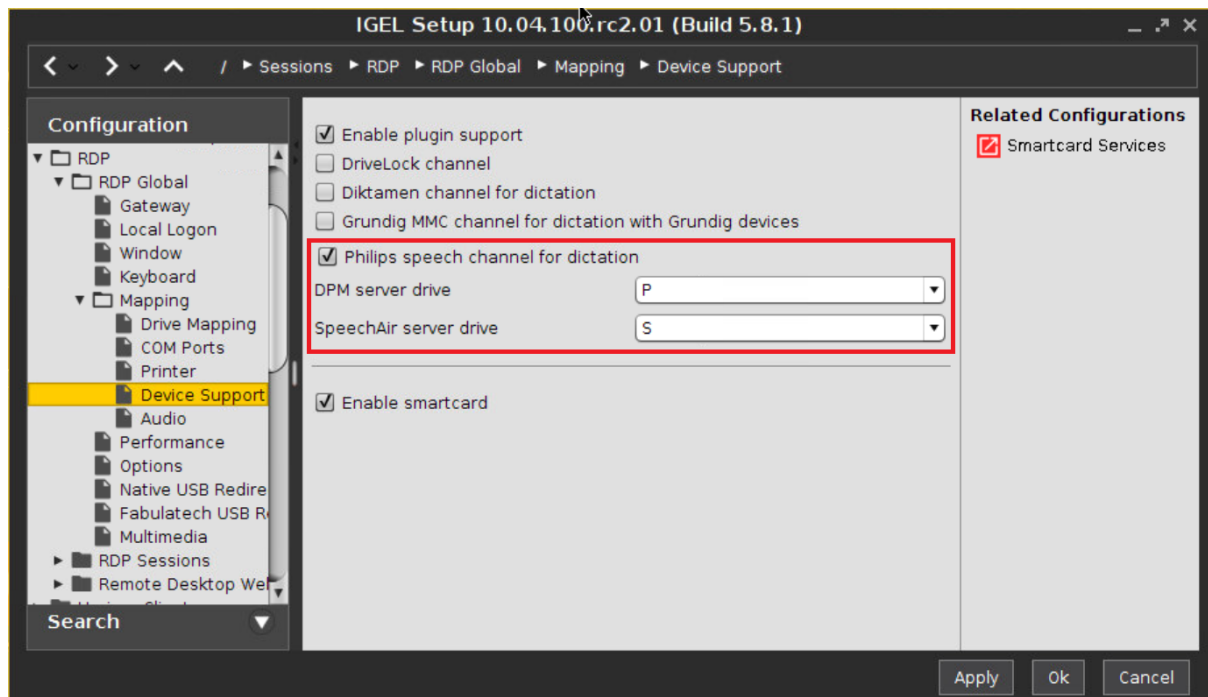
3.5.1. Citrix on Igel clients

Go to **IGEL Setup / Citrix XenDesktop/Xenapp / HDX/ICA Global / Mapping / Device Support** and checkmark “**Philips speech channel for dictation**”.



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”**.



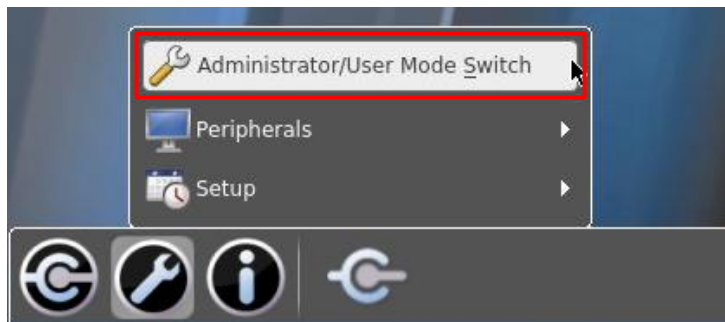
3.6. Installation on HP ThinPro clients (Citrix)

1. Copy the files

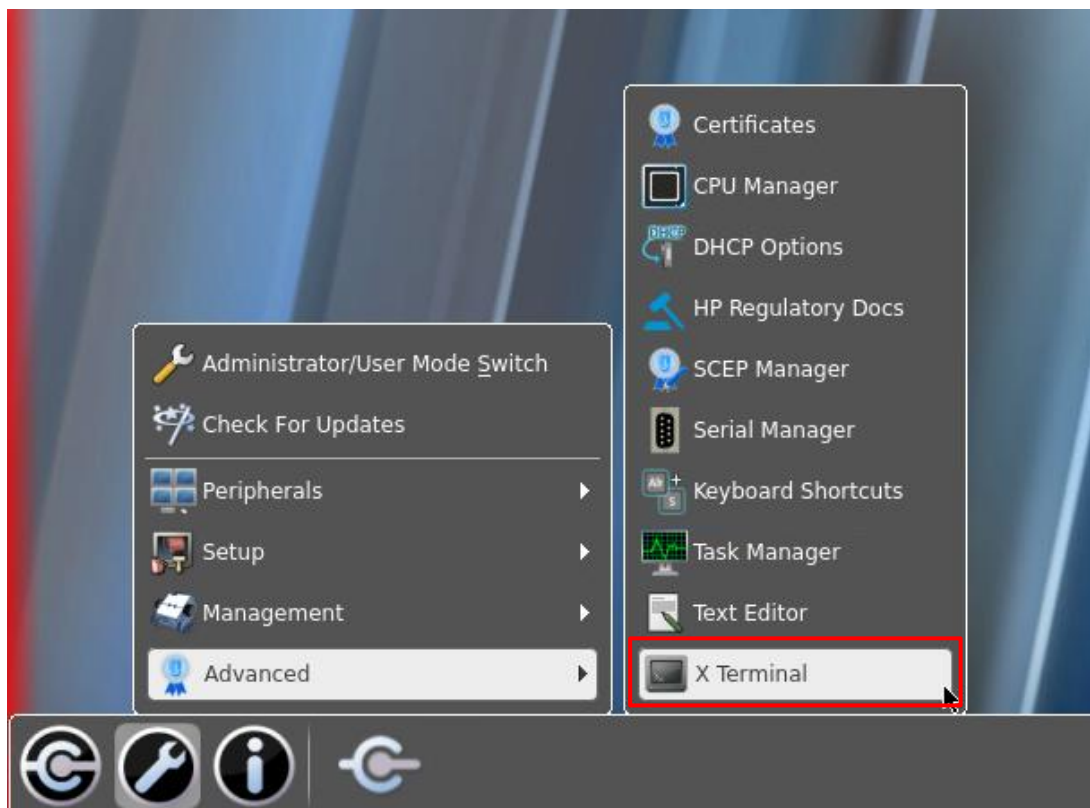
- **PhilipsSpeechDrivers-<version>**
- **sh, joydev-3.8.13-hp_i386.deb**
- **DPMMountd.conf**

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#
```

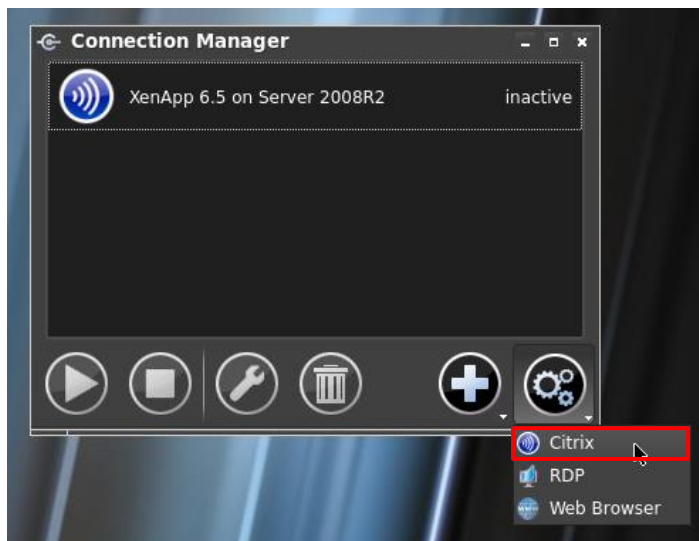
8. Copy **DPMMountd.conf** to the **/etc/init/** directory and change its permission to **644**:

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

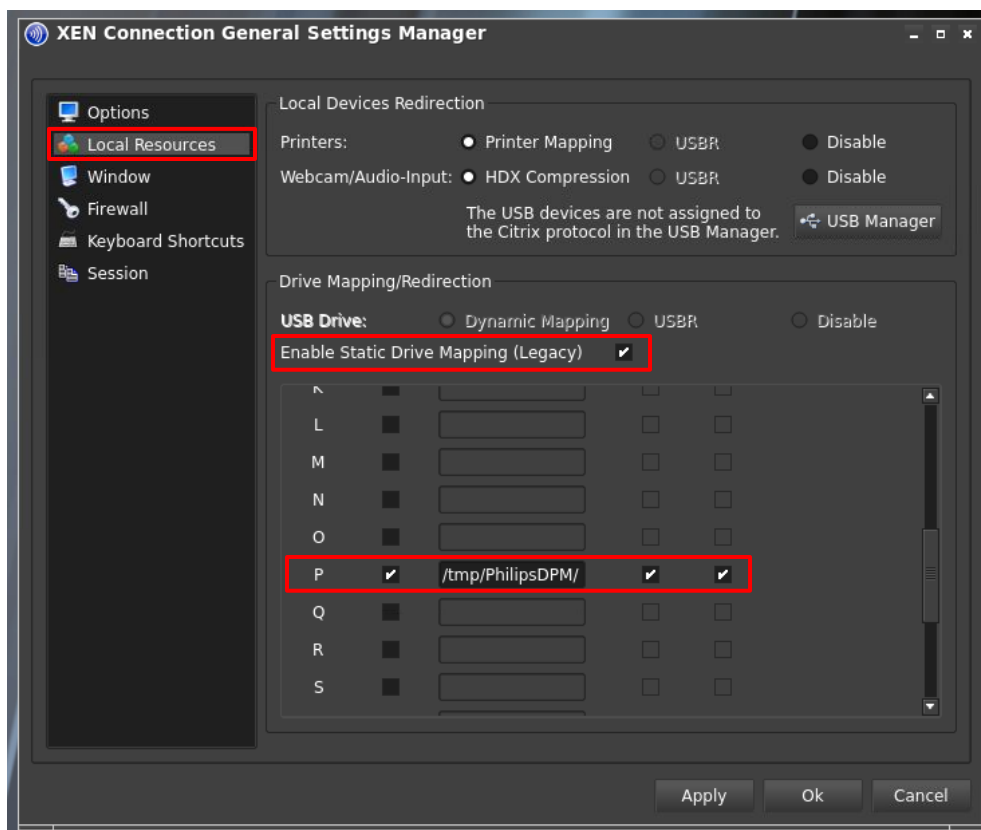
9. Lock the file system again by entering **fslock**:

```
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/** in case you are using a DPM, or map drive S: to **/tmp/PhilipsSpeechAir/** for SpeechAir devices.



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 Stratodesk noTouch clients (Citrix/RDP)

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

3.7.1. 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 the 'System configuration' window with various settings. The 'Dictation device/SpeechMike driver' is highlighted with a red box, and its value 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

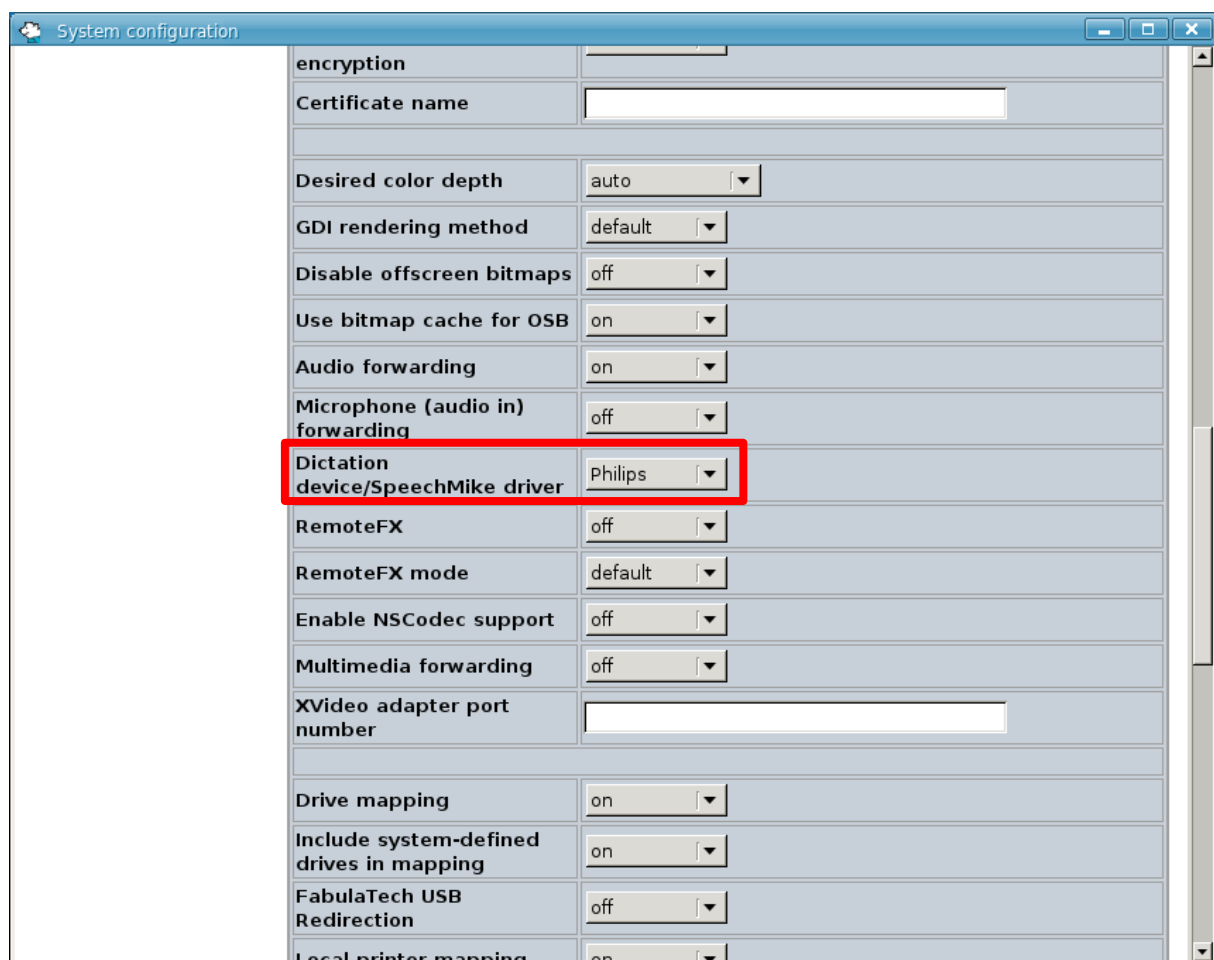
3.7.2. Microsoft WTS / Remote Desktop Services on Stratodesk noTouch clients

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**”:



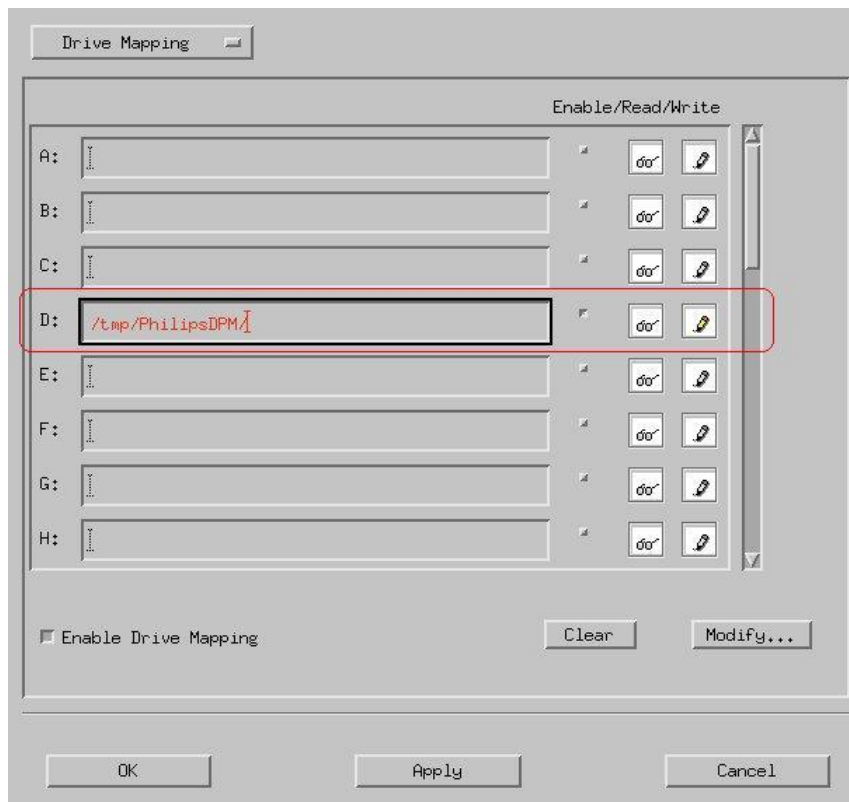
4. General configuration on Linux clients

4.1. DPM and SpeechAir 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 for DPM.
For the SpeechAir device it would be required to map drive S: to **/tmp/PhilipsSpeechAir/**

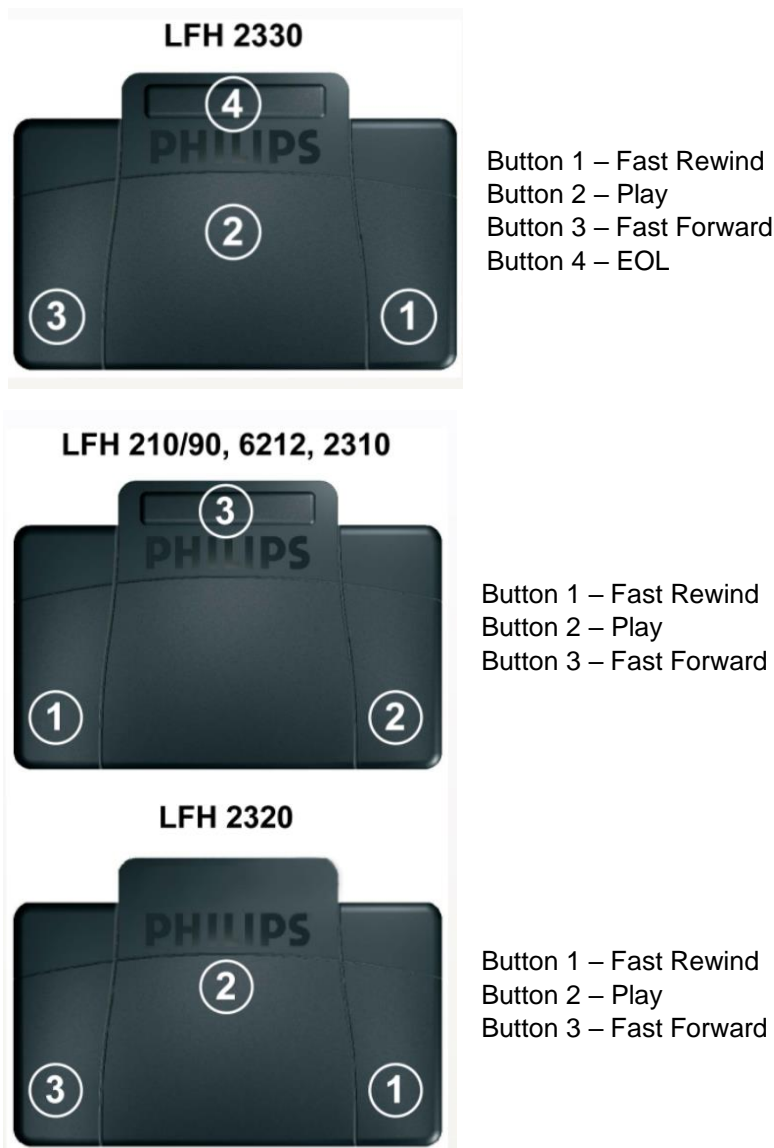


Ad2) Open the `/etc/PhilipsSpeech/Settings.ini` file with a text editor and change the “**DPM Server Path**” value according to your needs, for example:

```
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:

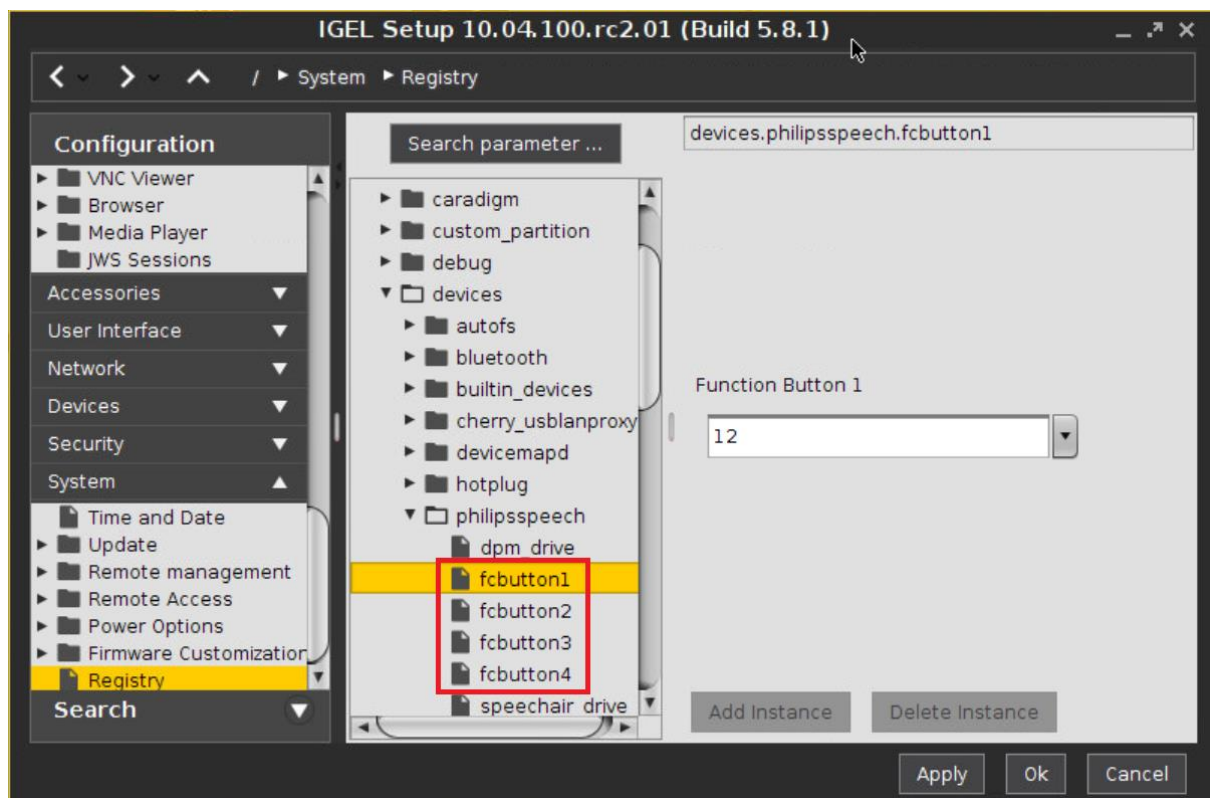
```
FCBUTTON1=  
FCBUTTON2=  
FCBUTTON3=  
FCBUTTON4=
```

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**.

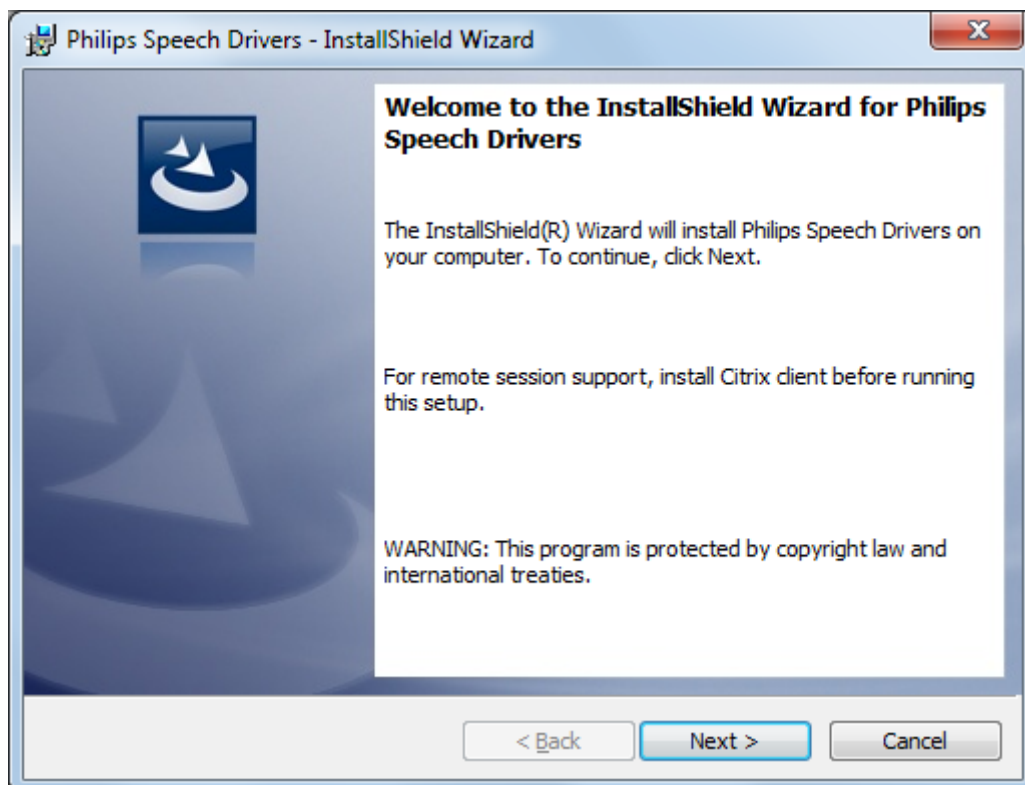
If you want to install the Citrix client extensions, install the Citrix ICA client software first, otherwise the according option in the install wizard will not be available.

5.2. Installation of the server / virtual desktop drivers

5.2.1. Start

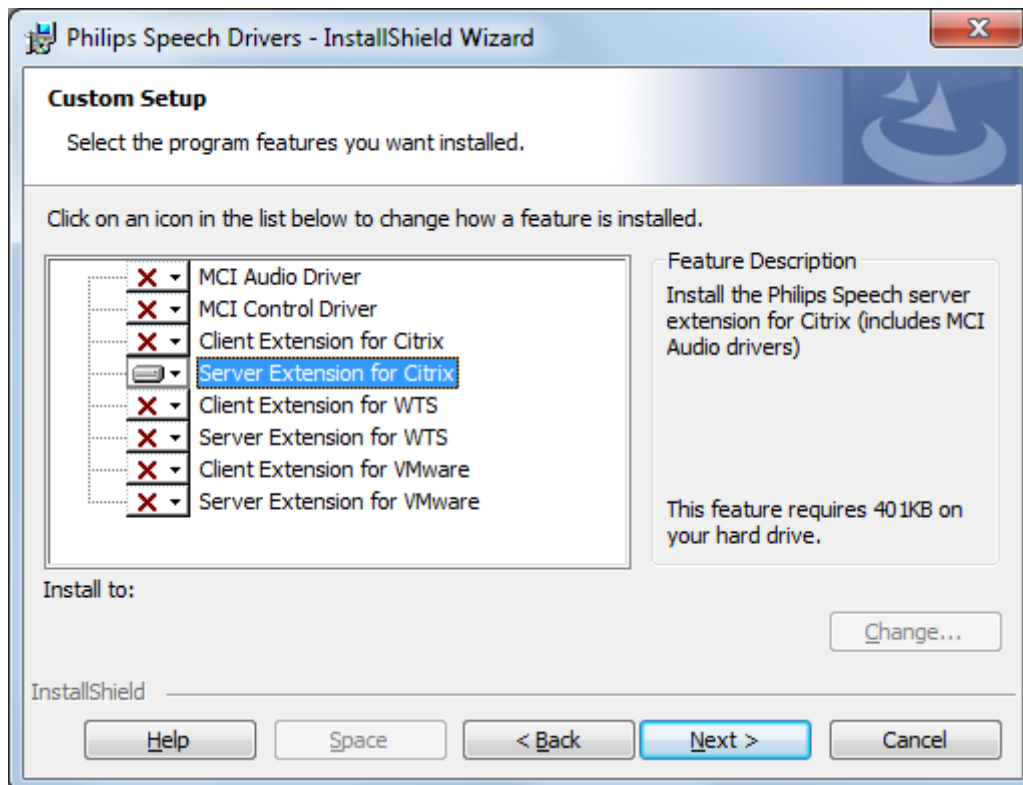
Start the PhilipsSpeechDriversSetup.exe

Click on **Next** Button



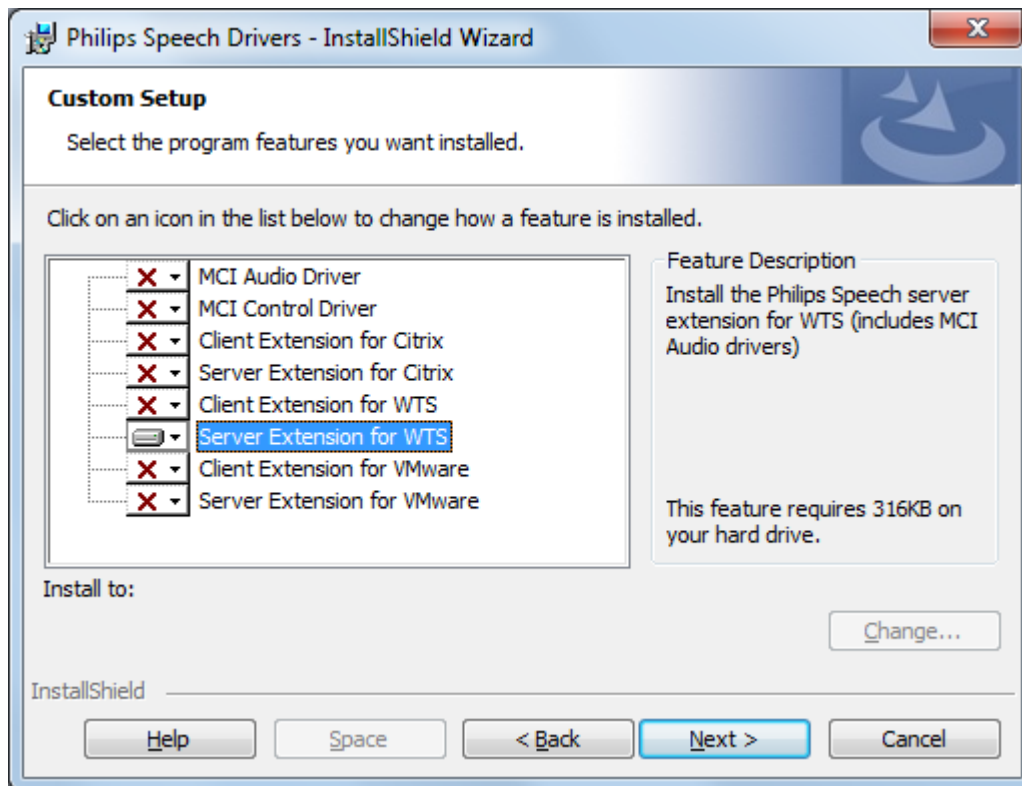
5.2.2. Citrix selection

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



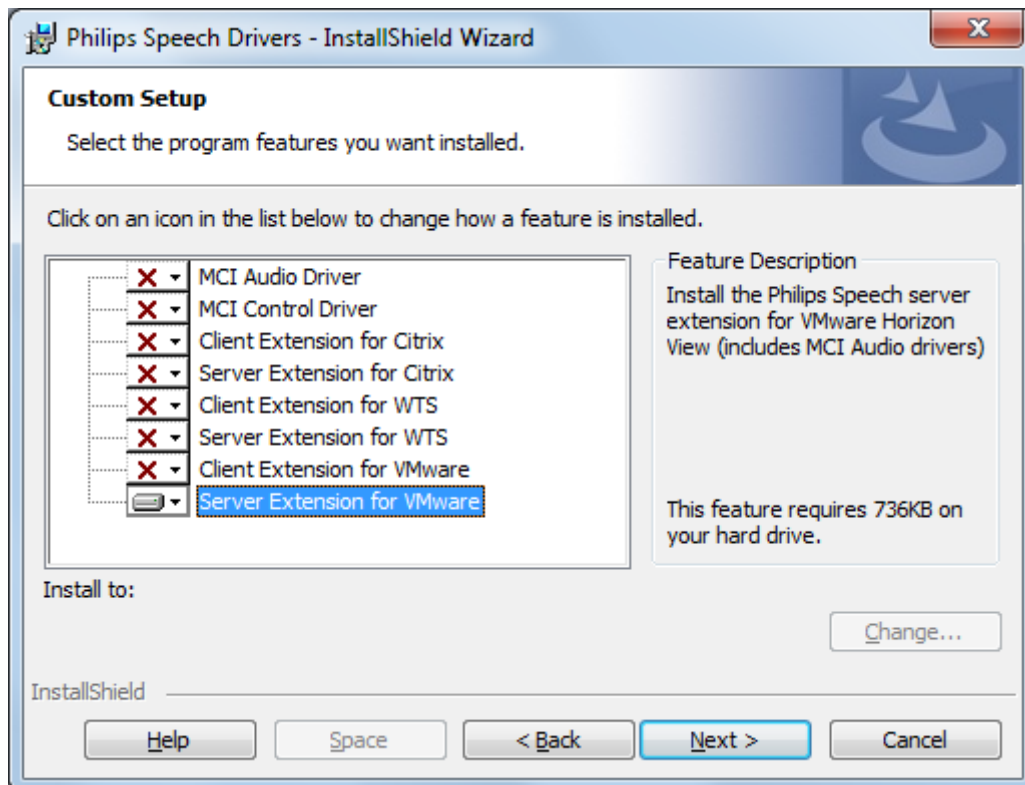
5.2.3. Microsoft WTS / Remote Desktop Services selection

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



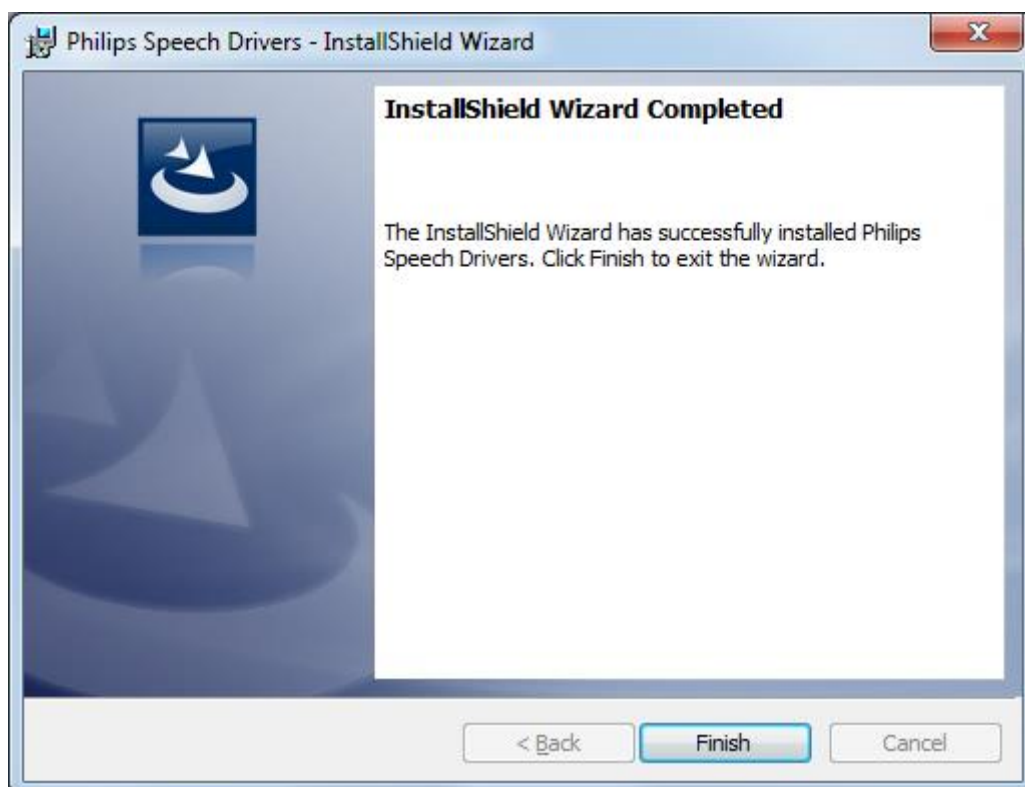
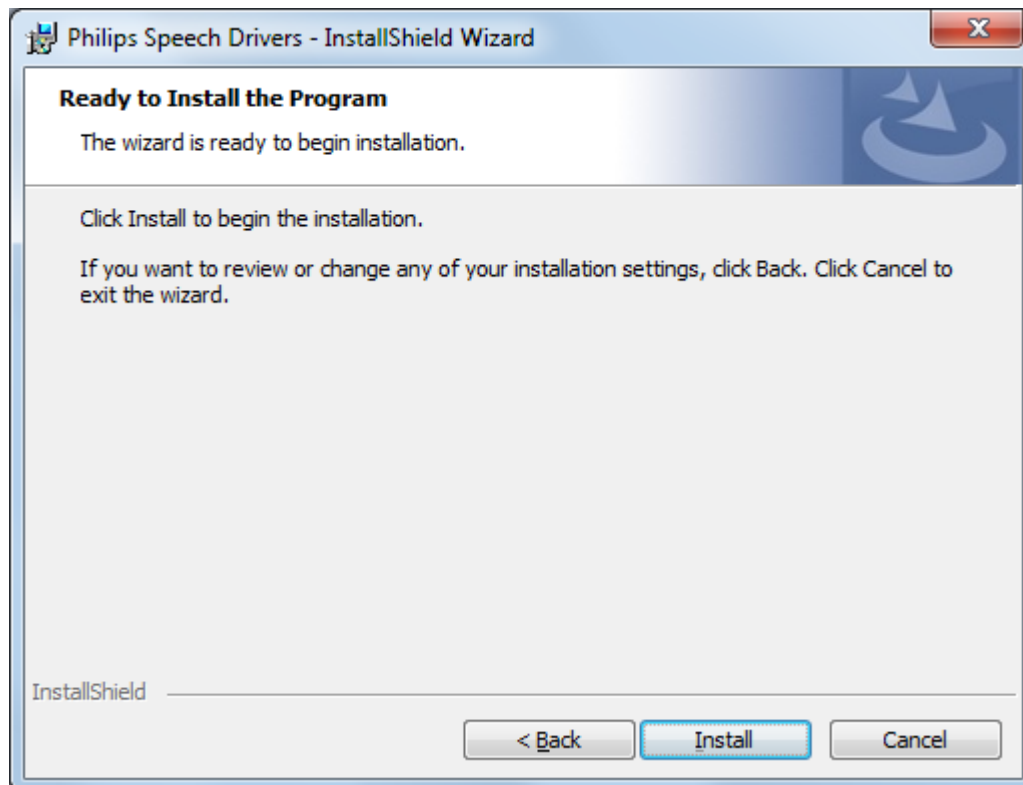
5.2.4. VMware Horizon View selection

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



5.2.5. Finish installation

Click on button **Install**



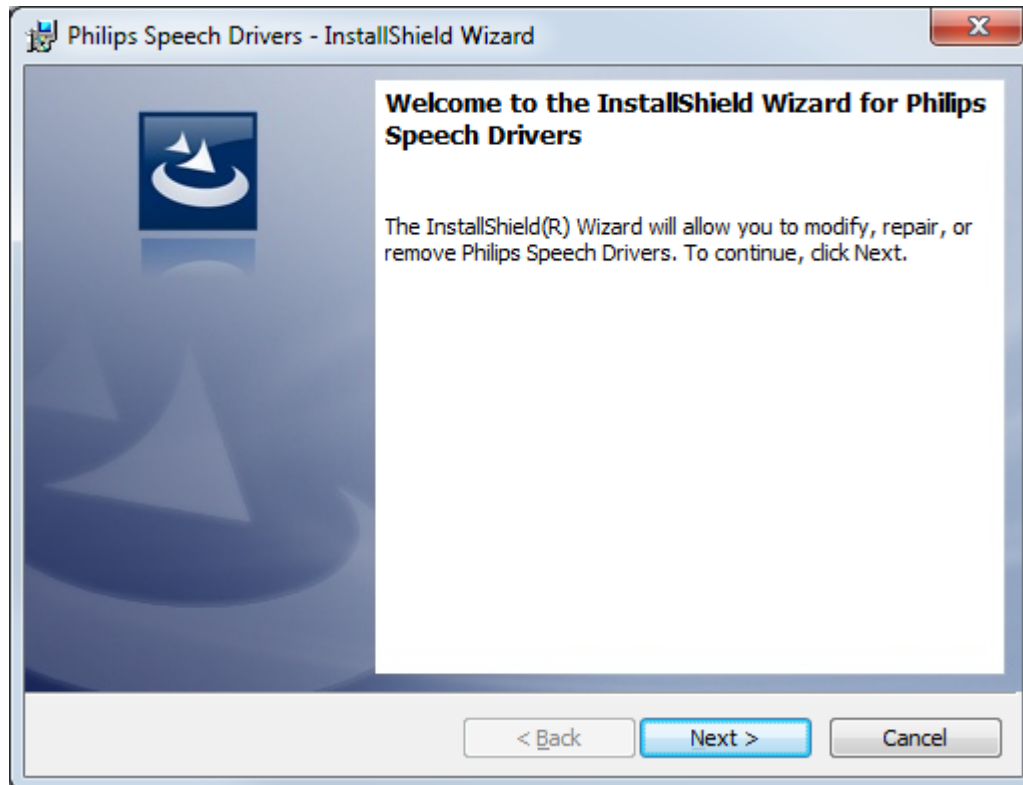
InstallShield wizard has successfully installed the Philips Speech drivers - click **Finish**. If asked, please perform a restart for the configuration changes made by Philips Speech Drivers to take effect.

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

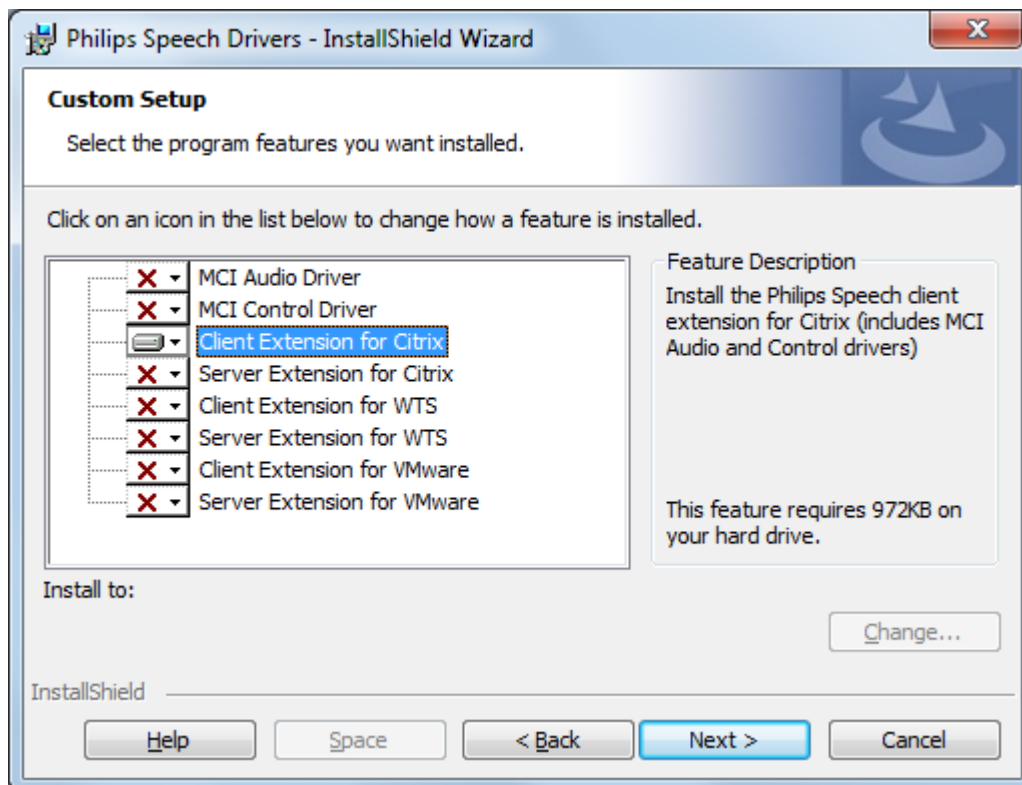
Start the PhilipsSpeechDriversSetup[x64].exe



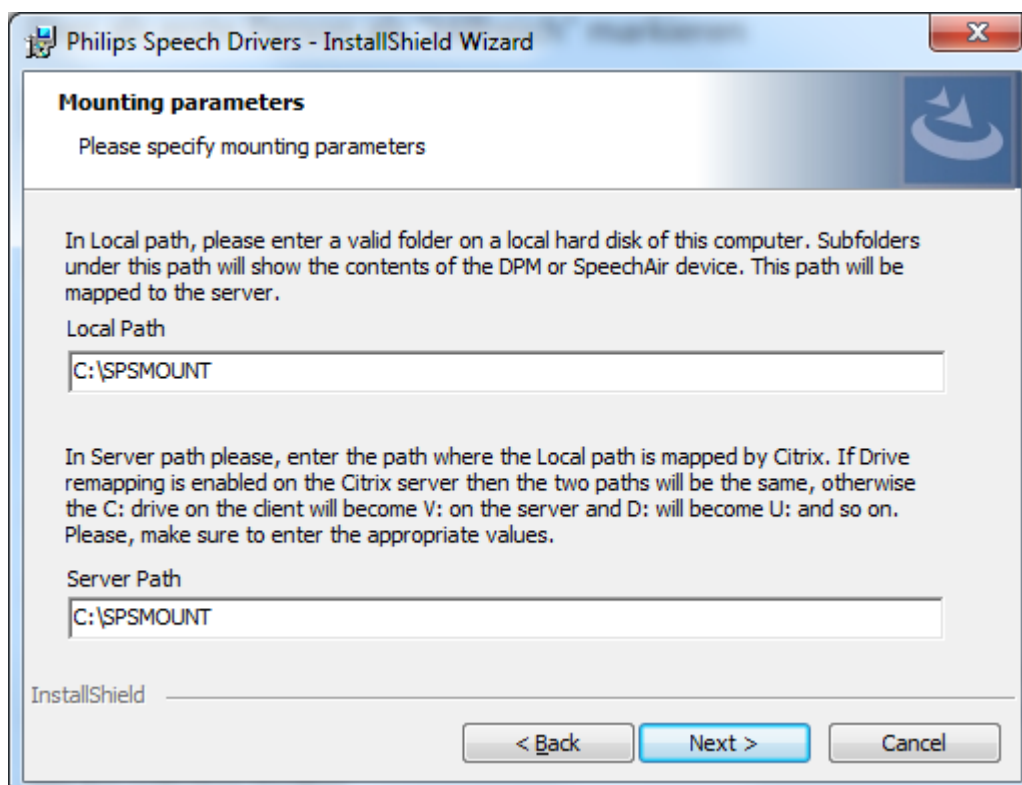
Click **Next**

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 “Local Path” please enter a valid folder on local hard disk of this computer - this path will show the contents of the DPM or SpeechAir device.
- In the “Server Path” please enter the path where the DPM or SpeechAir 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.

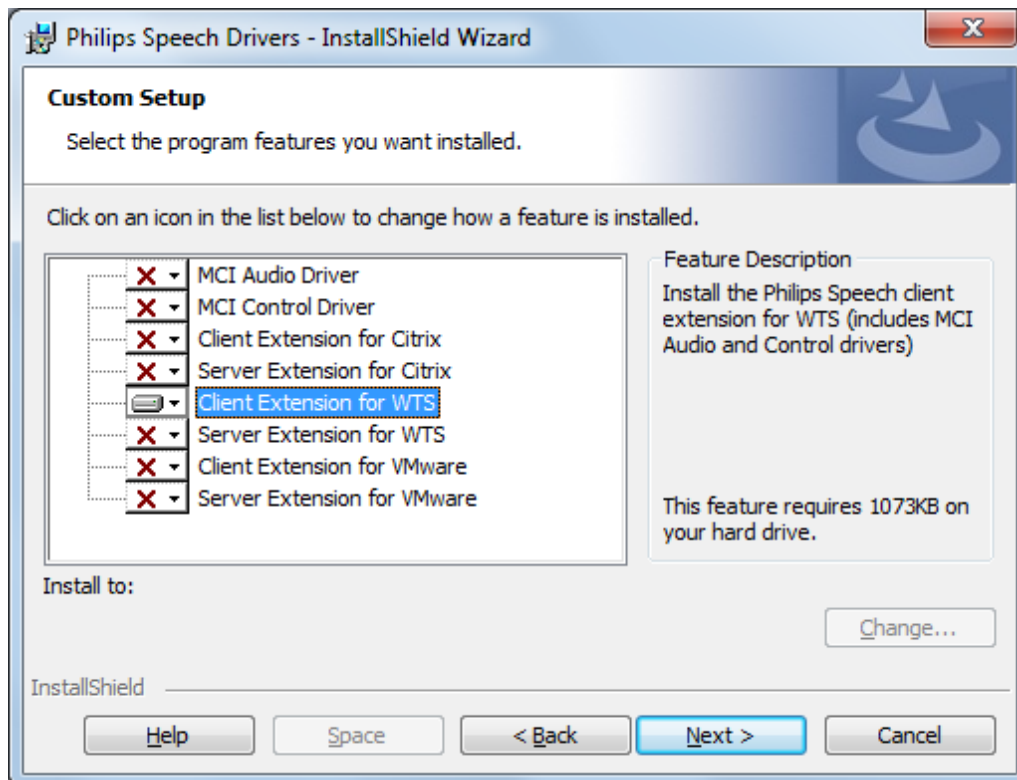
The Path settings can be changed later by reinstalling the Drivers.

Note:

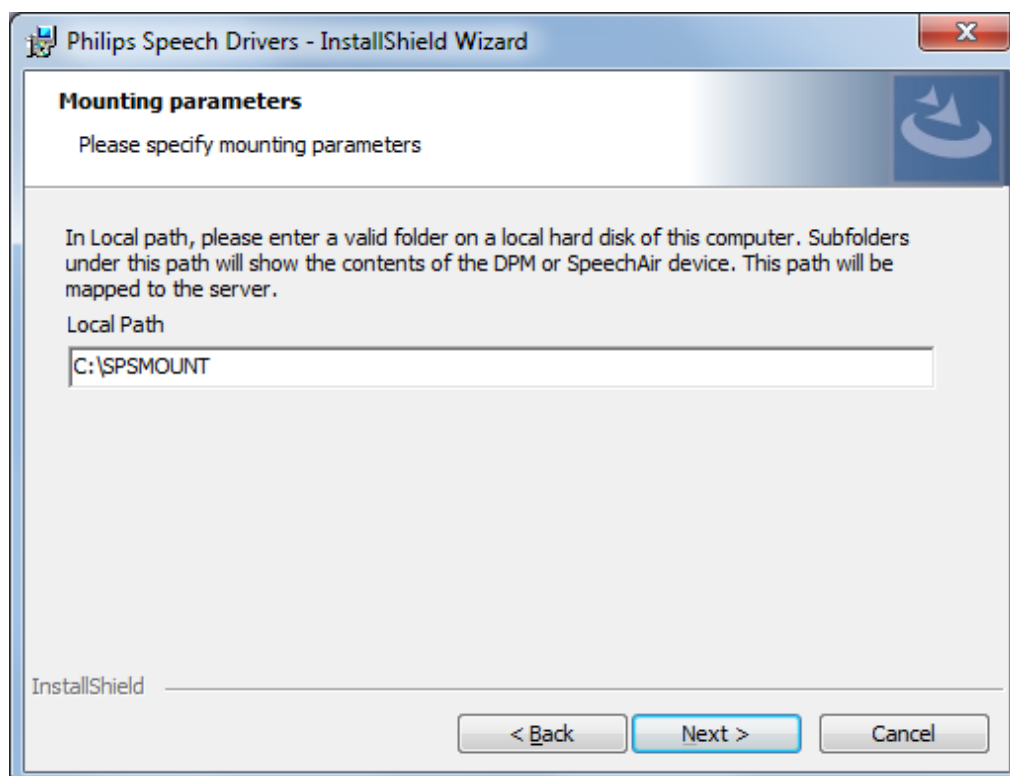
Please be aware that the drive letter defined for “Server Path” gets released in case you remove the “DPM Mounter Service”. If a real physical hard drive is defined for “Server Path” this would mean that you have to reallocate the drive letter for the relevant drive in the operating system.

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**.

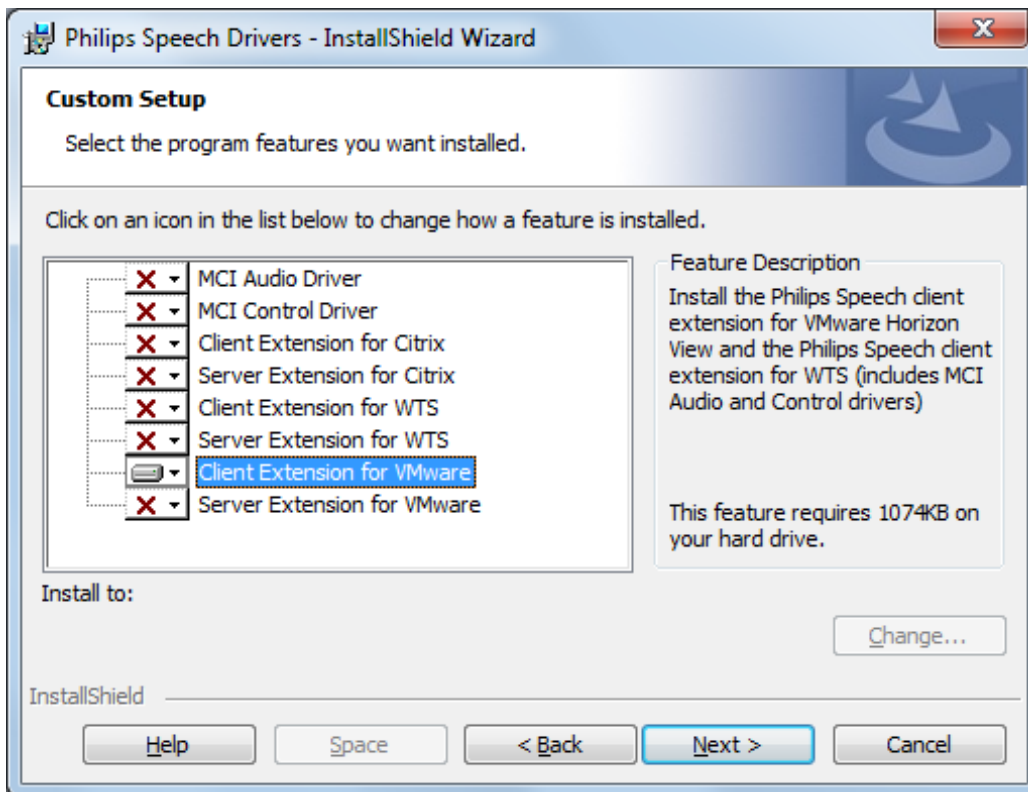


For the Local Path please enter a valid folder on local hard disk of this computer – this path will show the contents of the DPM or SpeechAir device. The Local Path can be changed later by reinstalling the Drivers.

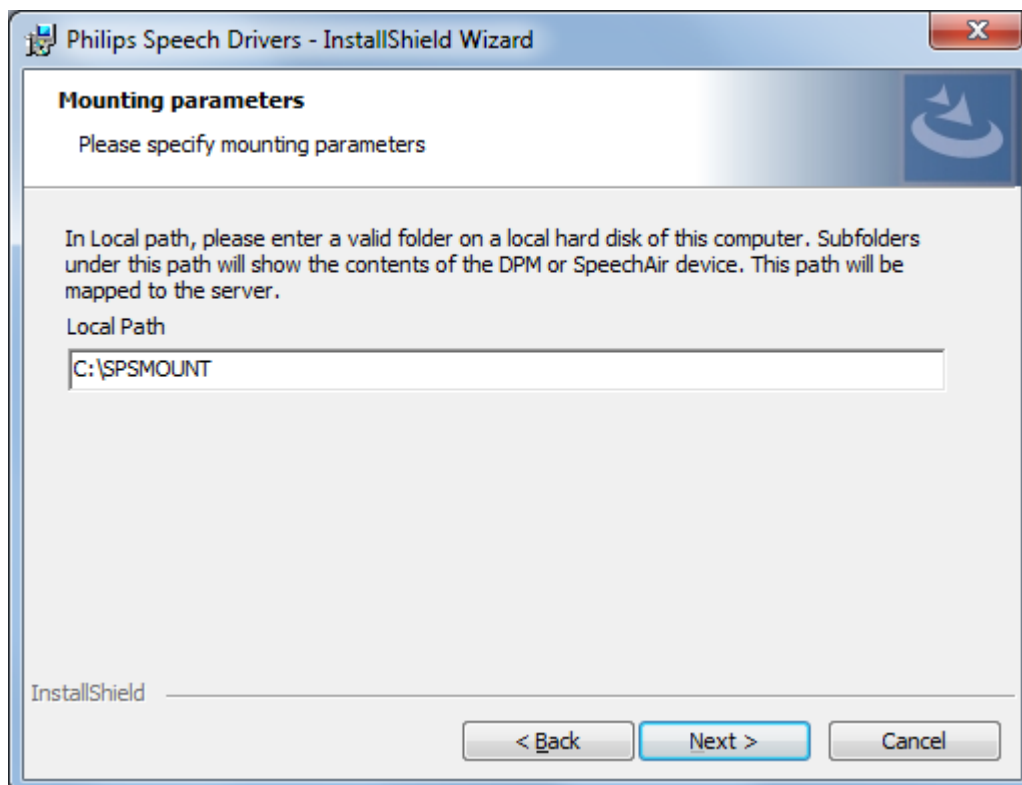
Note: Drive Mapping only works for NTFS file systems. (e.g. FAT will fail)

5.3.4. VMware Horizon View

This chapter shows the VMware Horizon View client installation settings.

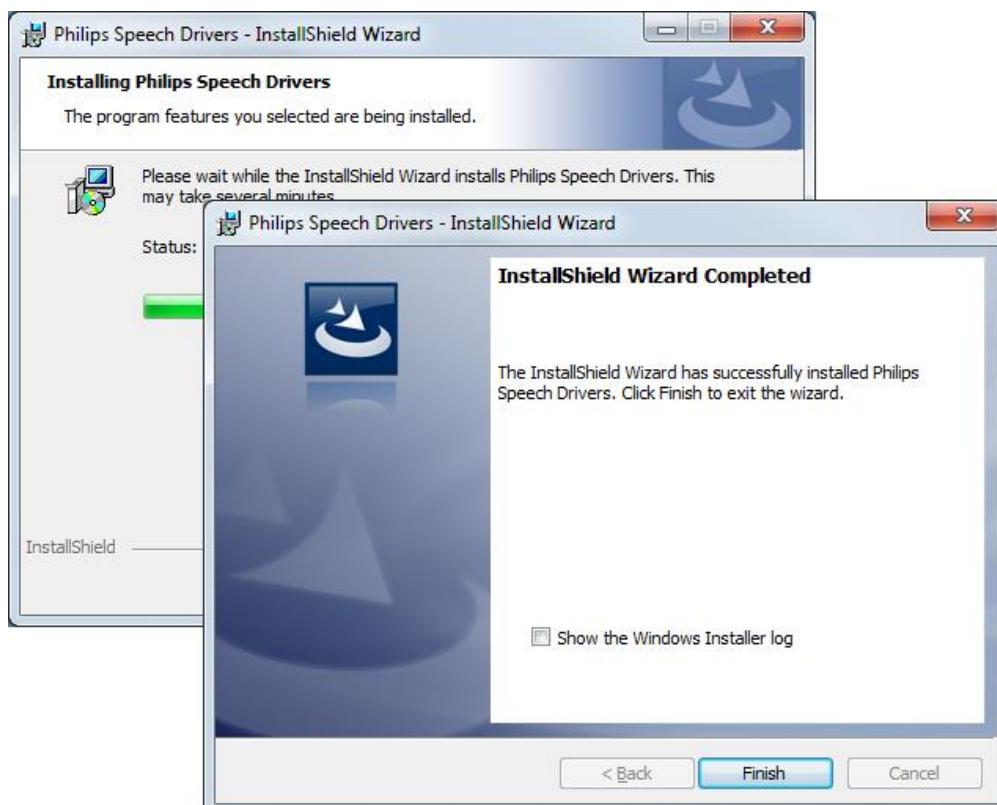
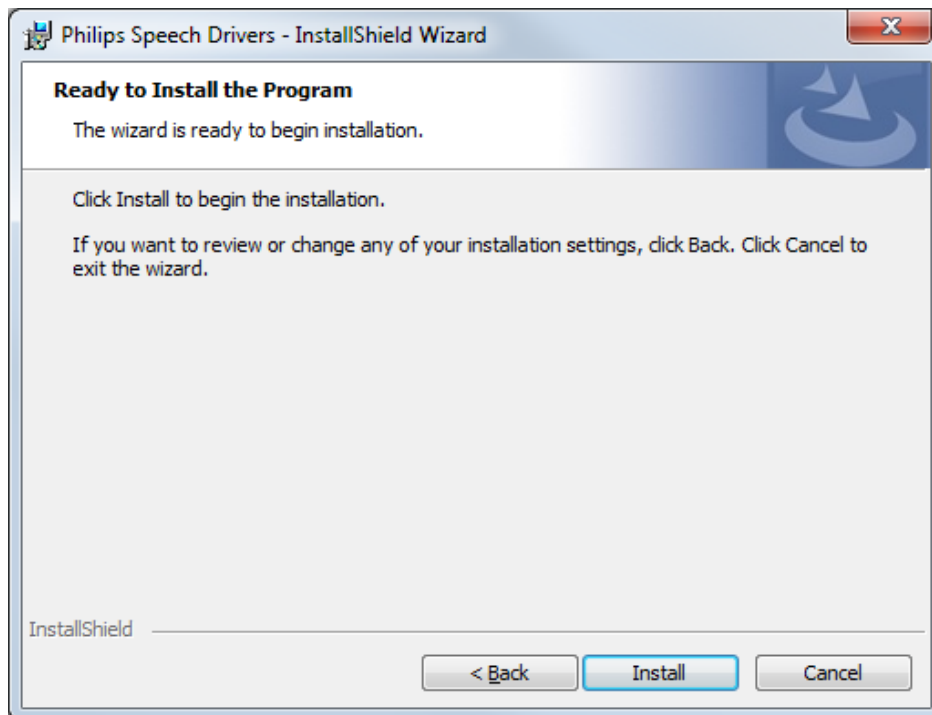


Select the options as displayed in the screenshot and click **Next**.



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"/I*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 MSIExec (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. 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
```

7. 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
XMCIPSPCT.dll	SYSTEM	X	X	X	X			
XMCIPSPA.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 DPMMounterSvc.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	

8. Appendix

8.1. Installation Desktop Experience

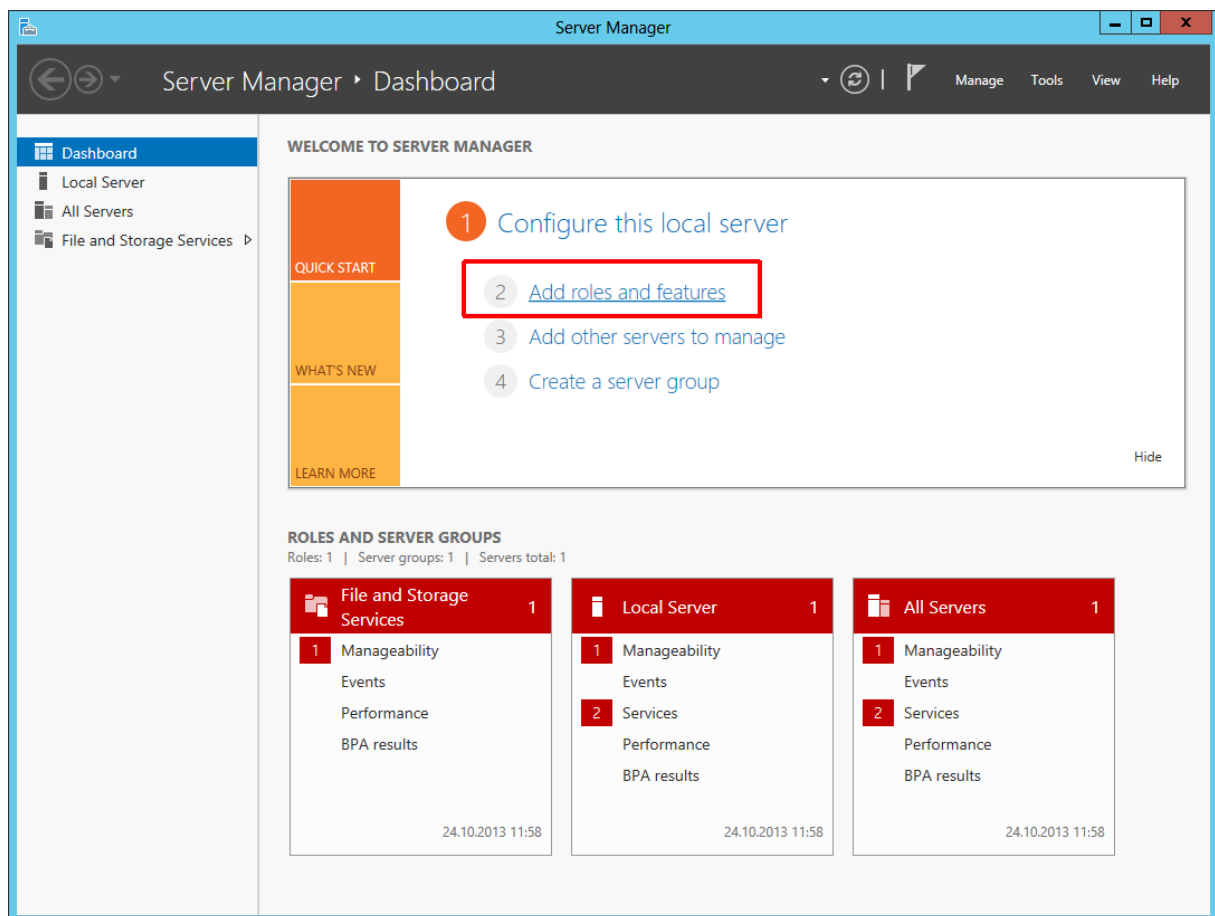
If your server operating system is Windows Server 2008R2 or Server 2012R2, it is required to enable the Desktop Experience feature on your Windows server.

8.1.1. Microsoft Windows Server 2012R2

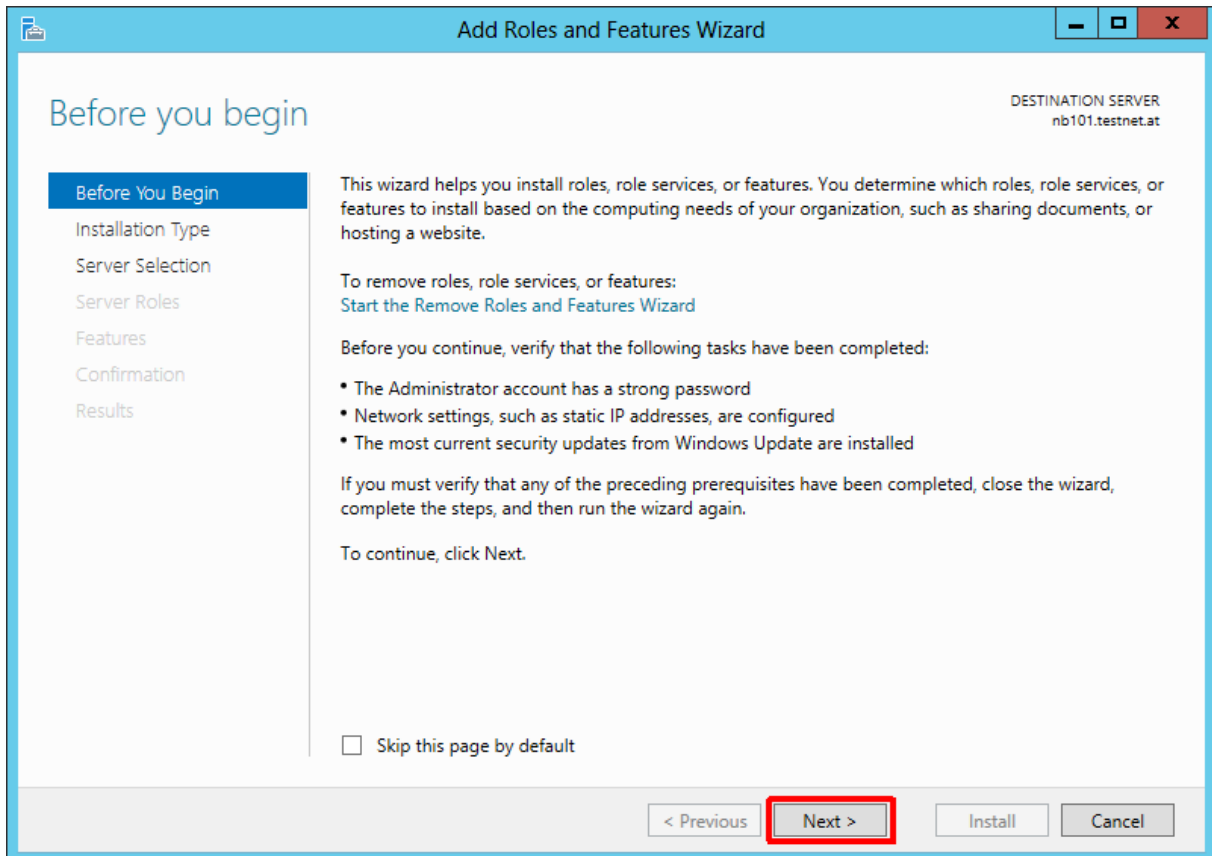
NOTE:

The Server needs to be restarted after the installation completes.

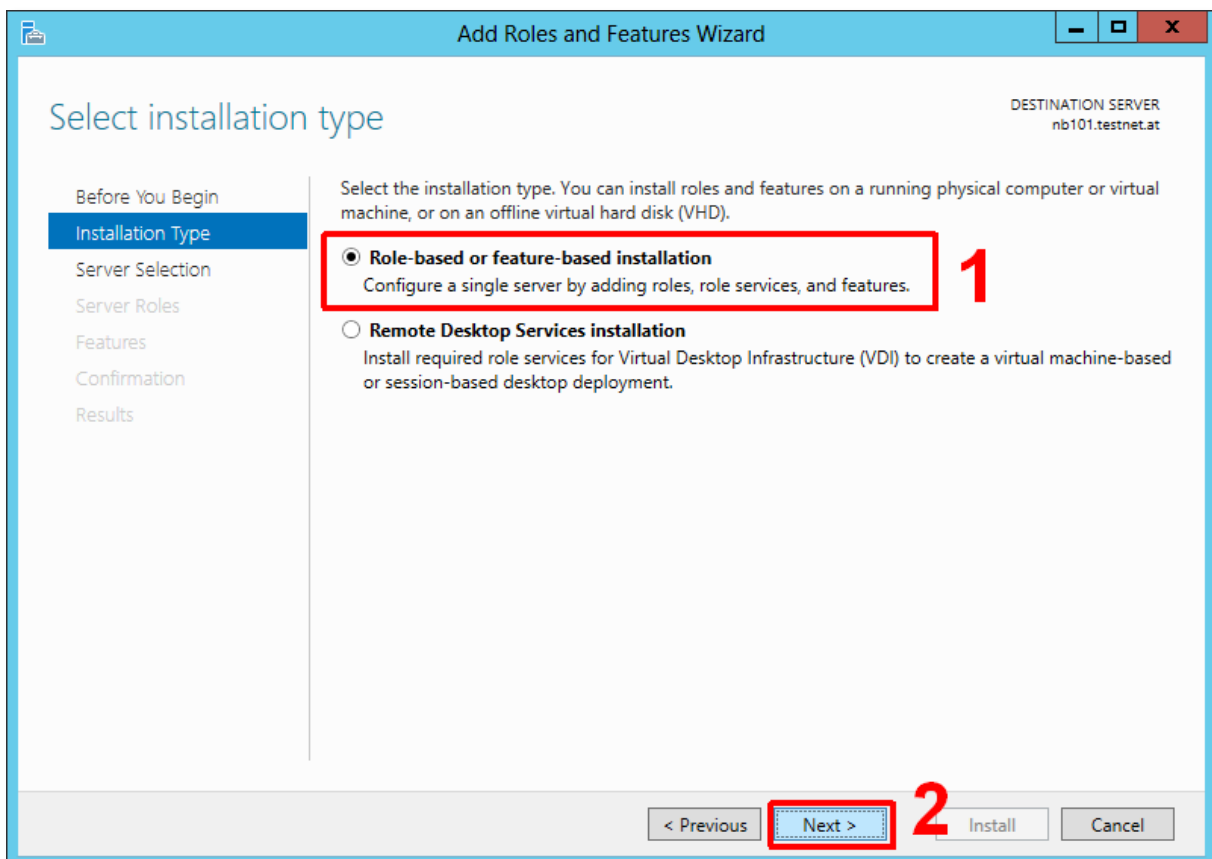
In the **Server manager**, select the 2nd option – **Add roles and features**



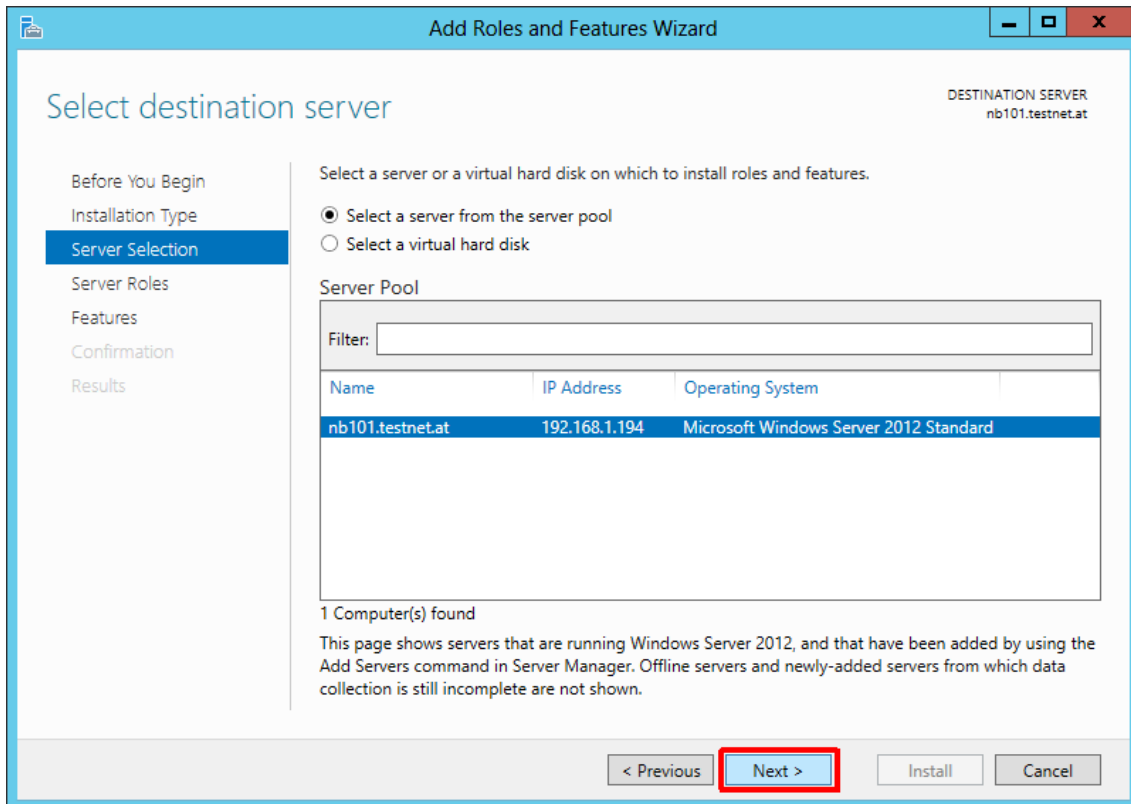
Click on **Next**



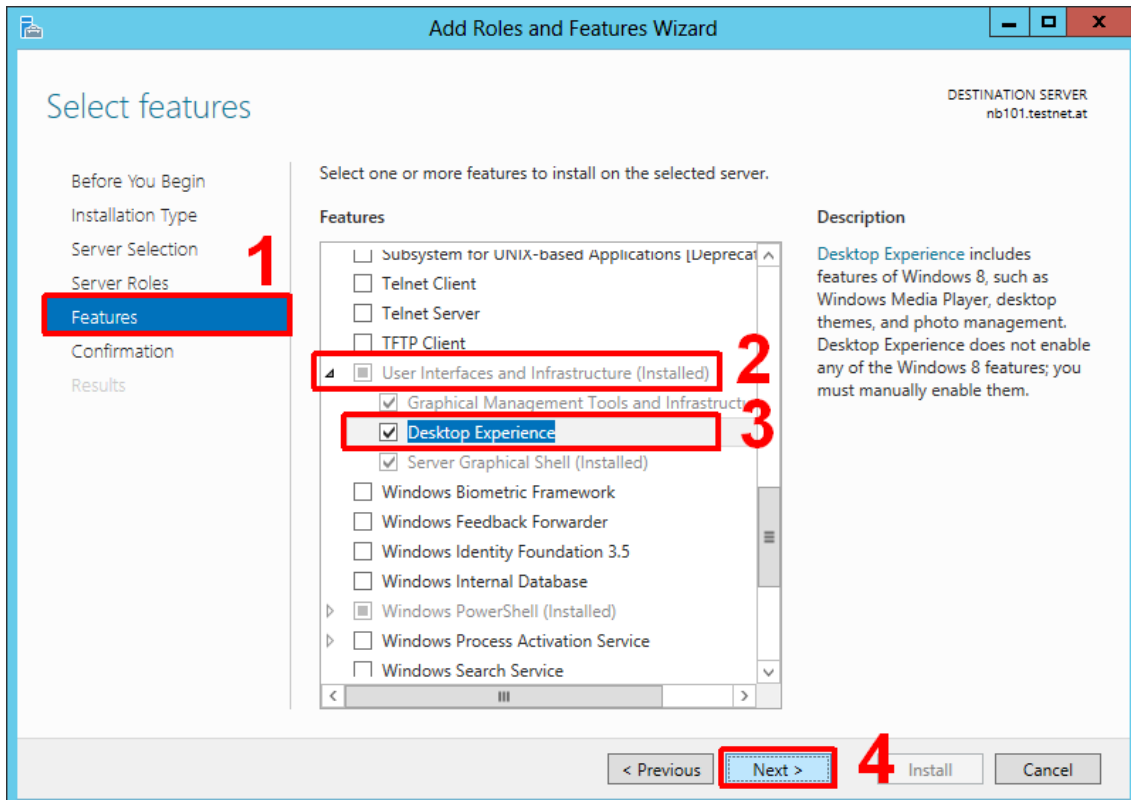
Select the first option [1] – **Role-based or feature-based installation** and click **Next** [2]



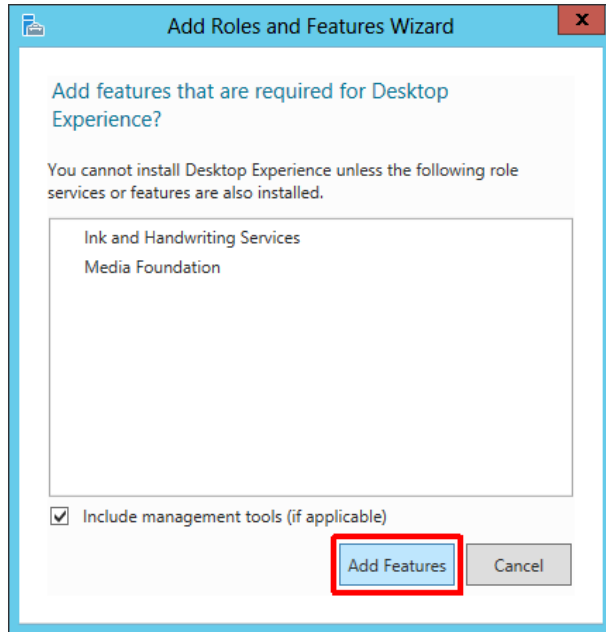
Click **Next**



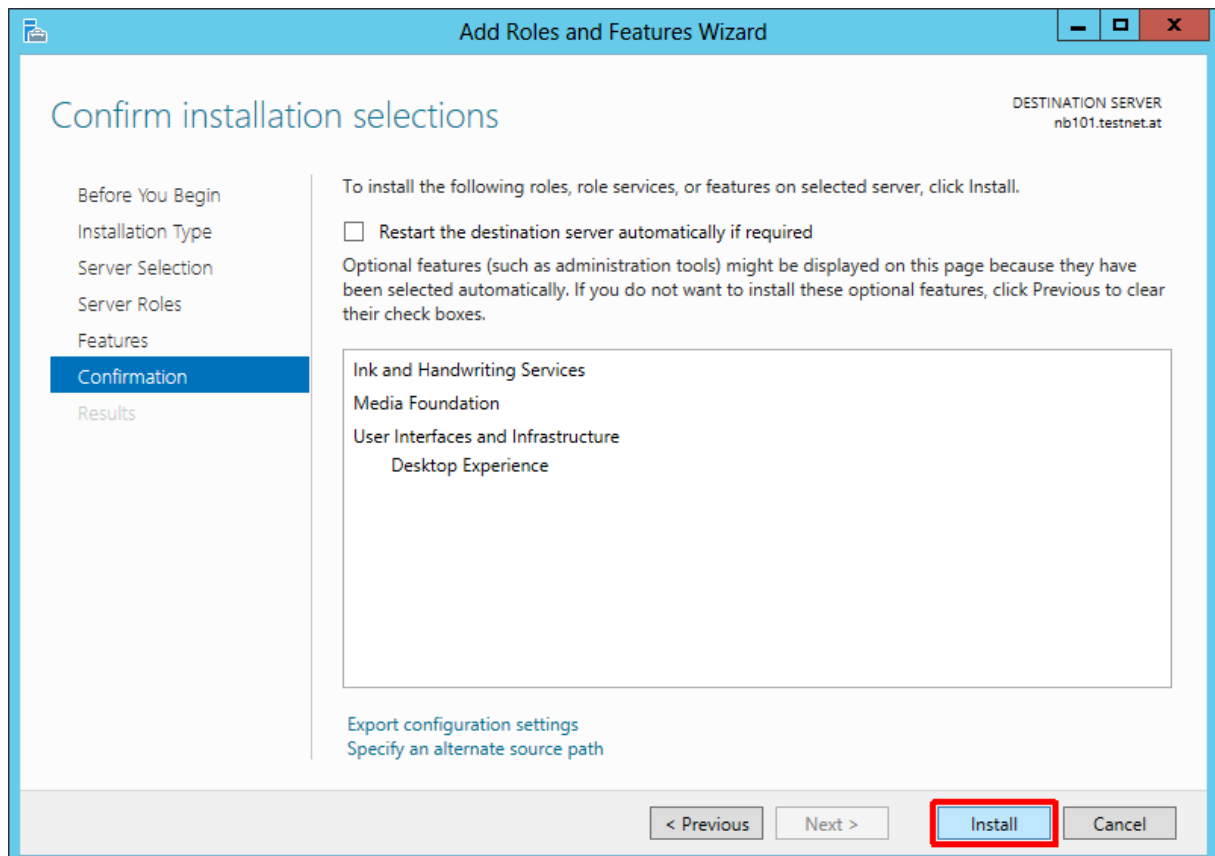
On the **Features** menu [1] select the – **User Interfaces and Infrastructure (installed)**[2] and activate **Desktop Experience** [3] and click finally click on **Next** [4]



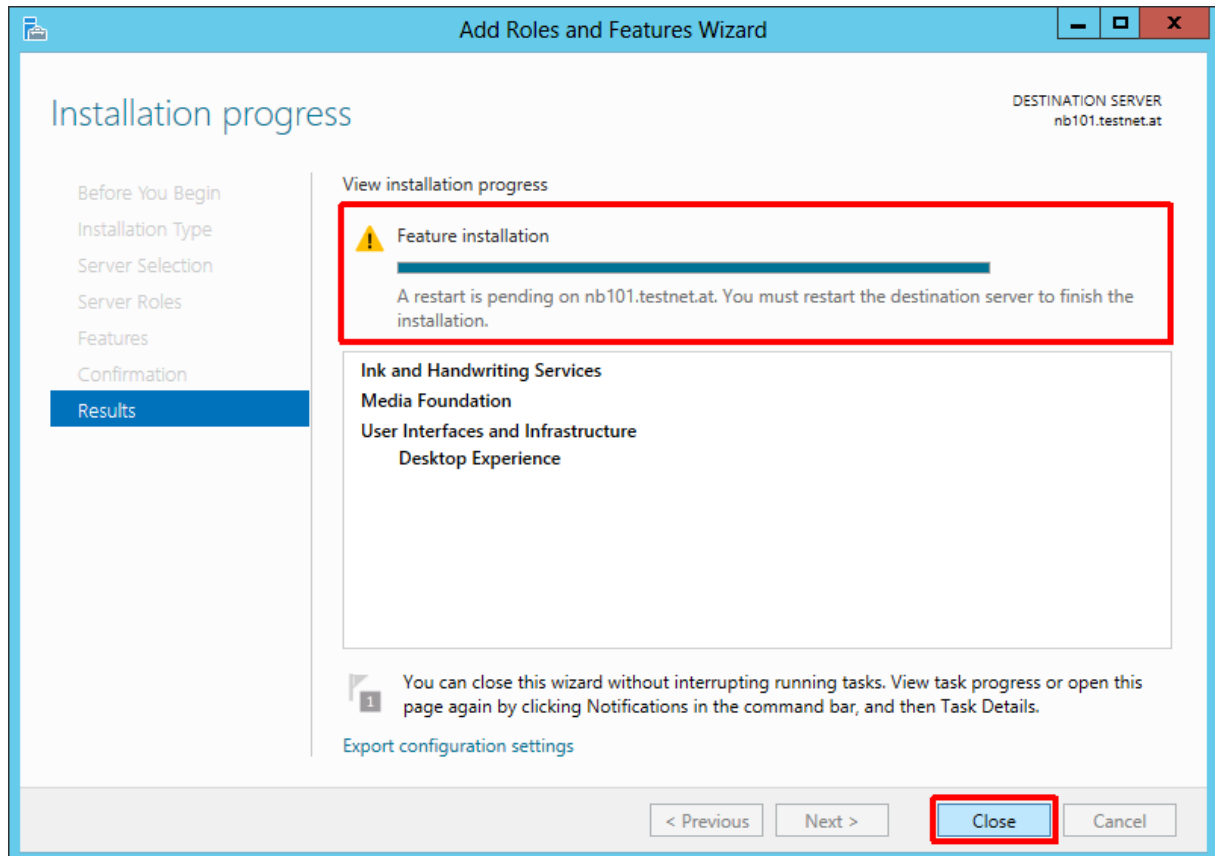
Required components will be installed – click **Add Features**



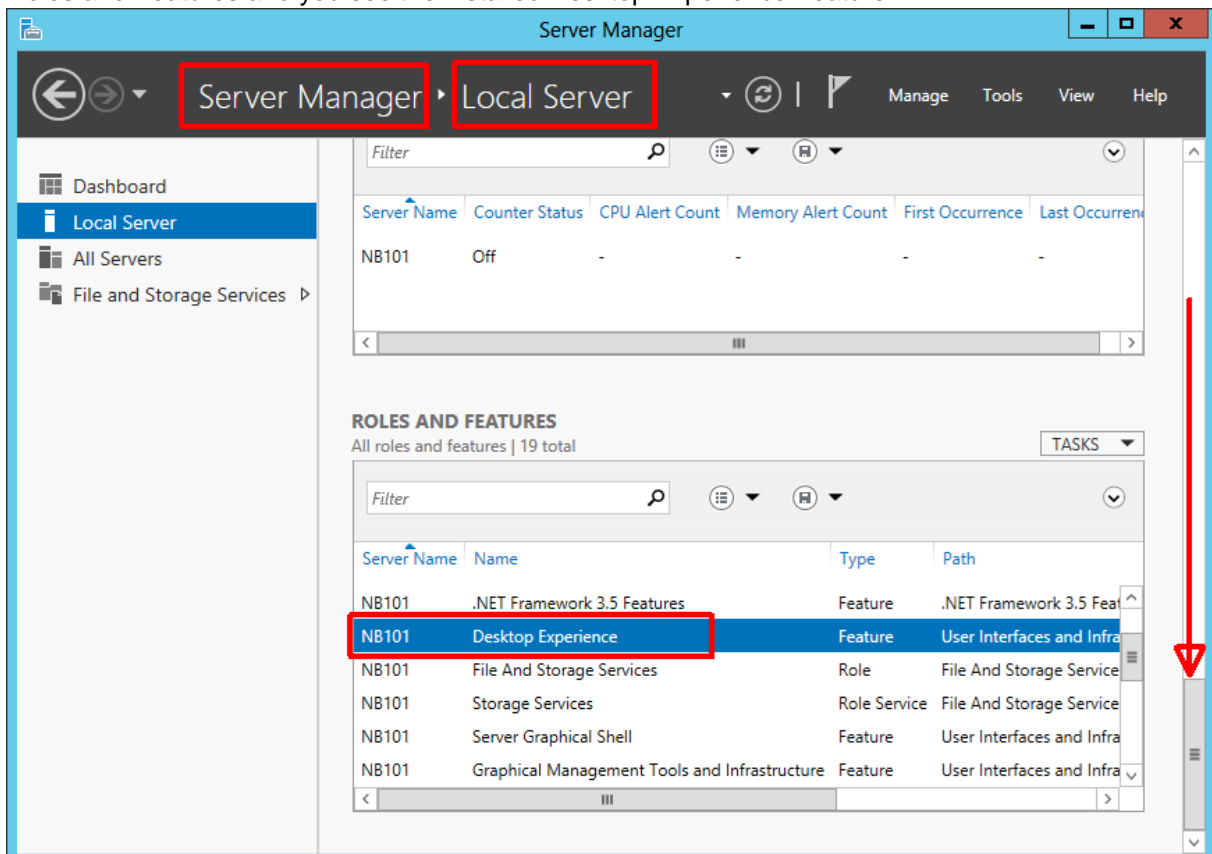
Finally click on **Install**



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.



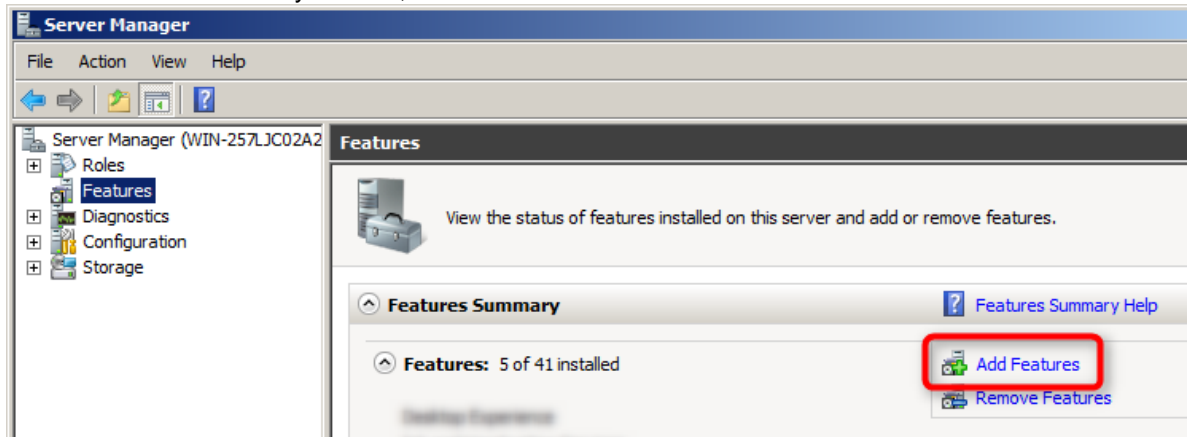
8.1.2. Microsoft Windows Server 2008R2

NOTE:

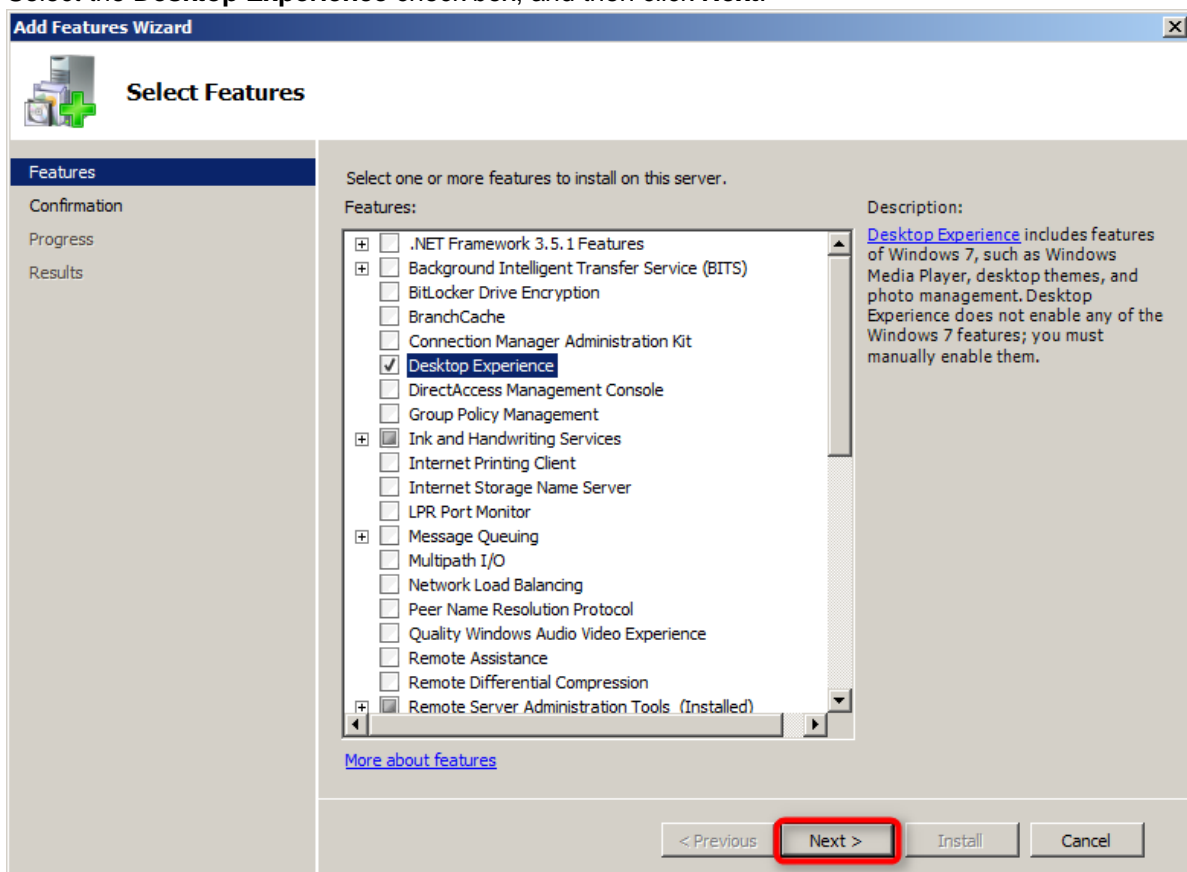
The Server needs to be restarted after the installation completes.

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

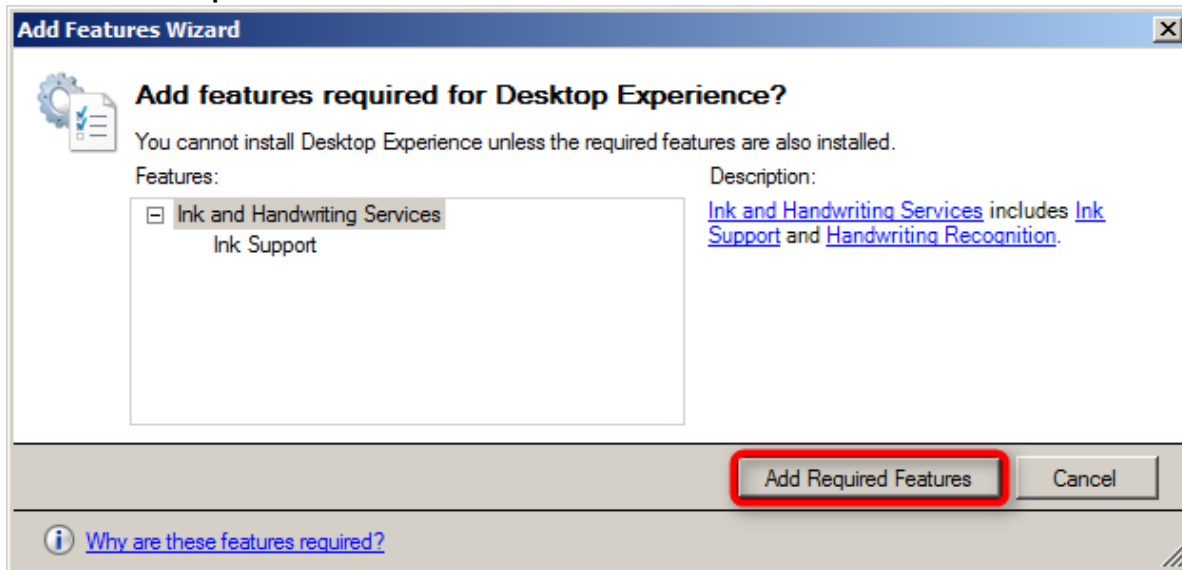
In the Features Summary section, click **Add Features**.



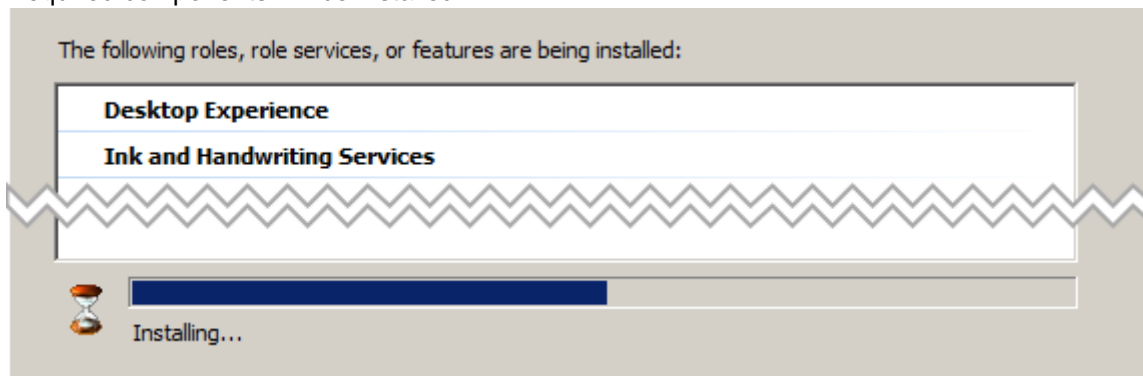
Select the **Desktop Experience** check box, and then click **Next**.



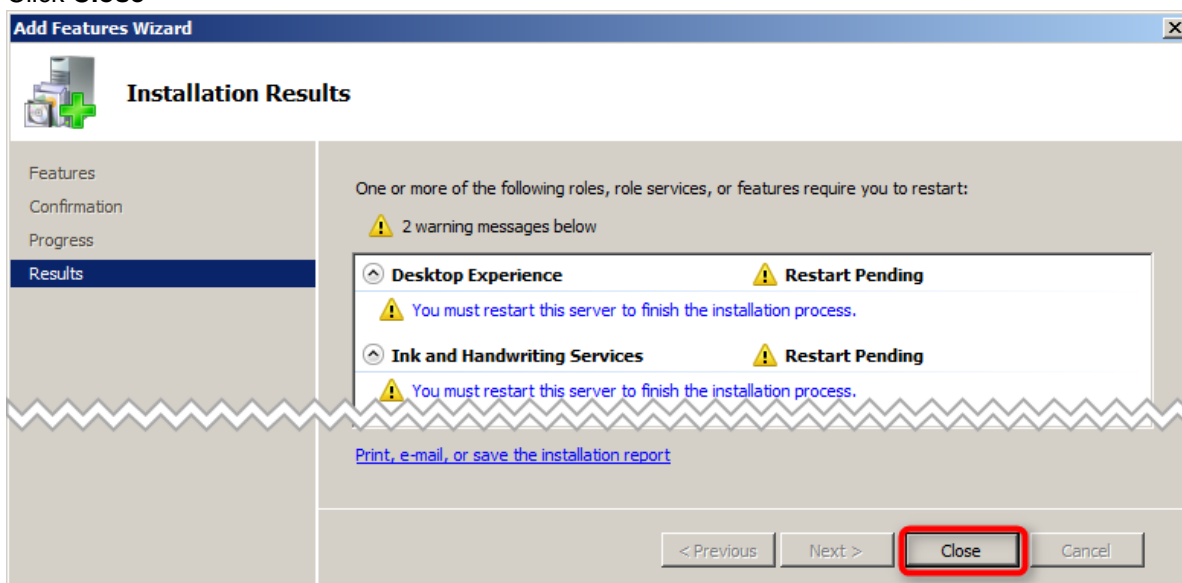
Click on **Add Required Features**



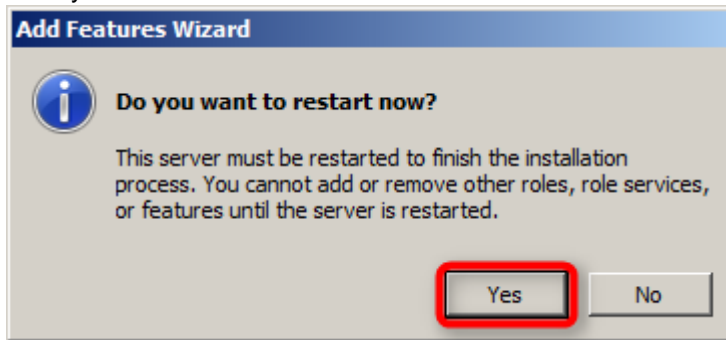
Required components will be installed.



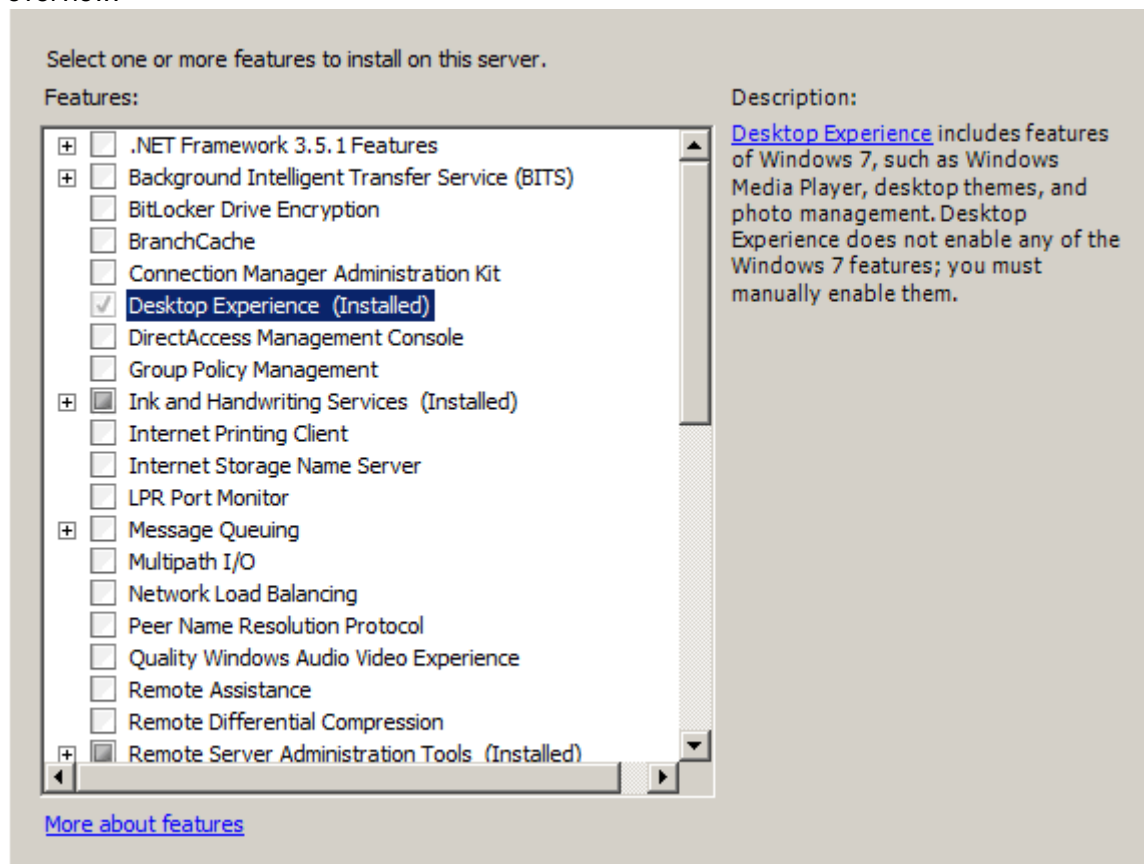
Click **Close**



Finally click on **Yes**



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



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