



Dragon and Citrix products Administrator Guide

Version 2.5



Copyright

2016. Dragon Medical Network Edition, 2.5.

This material may not include some last-minute technical changes and/or revisions to the software. Changes are periodically made to the information provided here. Future versions of this material will incorporate these changes.

No part of this manual or software may be reproduced in any form or by any means, including, without limitation, electronic or mechanical, such as photocopying or recording, or by any information storage and retrieval systems, without the express written consent of Nuance Communications, Inc. Specifications are subject to change without notice.

Copyright © 2002-2016 Nuance Communications, Inc. All rights reserved.

Nuance, ScanSoft, the Nuance logo, the Dragon logo, Dragon, DragonBar, Natural Language Technology, Select-and-Say, MouseGrid, and Vocabulary Editor are registered trademarks or trademarks of Nuance Communications, Inc. in the United States or other countries. All other names and trademarks referenced herein are trademarks of Nuance Communications or their respective owners. Designations used by third-party manufacturers and sellers to distinguish their products may be claimed as trademarks by those third-parties.

Plantronics is a registered trademark of Plantronics Inc.

Citrix, XenApp, and XenDesktop are trademarks of Citrix Systems, Inc. and/or one or more of its subsidiaries, and may be registered in the United States Patent and Trademark Office and in other countries

Disclaimer

Nuance makes no warranty, express or implied, with respect to the quality, reliability, currentness, accuracy, or freedom from error of this document or the product or products referred to herein and specifically disclaims any implied warranties, including, without limitation, any implied warranty of merchantability, fitness for any particular purpose, or non-infringement.

Nuance disclaims all liability for any direct, indirect, incidental, consequential, special, or exemplary damages resulting from the use of the information in this document. Mention of any product not manufactured by Nuance does not constitute an endorsement by Nuance of that product.

Notice

Nuance Communications, Inc. is strongly committed to creating high quality voice and data management products that, when used in conjunction with your own company's security policies and practices, deliver an efficient and secure means of managing confidential information.

Nuance believes that data security is best maintained by limiting access to various types of information to authorized users only. Although no software product can completely guarantee against security failure, Dragon Medical Network Edition software contains configurable password features that, when used properly, provide a high degree of protection.

L-3868

We strongly urge current owners of Nuance products that include optional system password features to verify that these features are enabled! You can call our support line if you need assistance in setting up passwords correctly or in verifying your existing security settings.

Published by Nuance Communications, Inc., Burlington, Massachusetts, USA

Visit Nuance Communications, Inc. on the Web at www.nuance.com.

Contents

| | |
|--|-----------|
| Chapter 1: Getting started | 1 |
| Getting Started with Dragon and Citrix | 2 |
| Audience for this guide | 2 |
| Introduction | 2 |
| Audience for this document | 3 |
| What's new | 4 |
| What's new in Dragon Medical Network Edition, 2.5 | 4 |
| Chapter 2: Using Dragon on a client computer | 5 |
| Dragon on a client computer | 6 |
| Dragon features that this deployment solution supports | 7 |
| Benefits of this deployment solution | 7 |
| Drawbacks of this deployment solution | 7 |
| Available workarounds | 7 |
| Install and deploy Dragon on a client computer | 8 |
| Chapter 3: Using Dragon on a client computer with vSync | 9 |
| Dragon on a client computer with vSync | 10 |
| Issues with Full Text Control may occur | 10 |
| The vSync plug-in | 11 |
| The vSync Full Text Control Support option | 11 |
| Deploying Dragon on a client computer with vSync support | 12 |
| Benefits of this deployment solution | 12 |
| Drawbacks of this deployment solution | 13 |
| Install and deploy Dragon on a client computer with vSync | 14 |
| Install vSync on a Citrix XenApp server | 15 |
| Enable the vSync Full Text Control option | 15 |
| Viewing vSync log files for Dragon user activity with Citrix published applications | 16 |
| Important note about the size of vSync log files | 16 |
| To enable vSync logging for all Dragon users that work with Citrix published applications | 16 |
| Restoring vSync support after updating a Citrix client | 17 |
| Pre-requisites for installing the DM Network Edition vSync Restoration Patch | 17 |
| Steps for installing the DM Network Edition vSync Restoration Patch on a workstation ... | 18 |
| vSync Frequently Asked Questions | 19 |
| Chapter 4: Using Dragon on a Citrix XenApp server | 21 |
| Dragon published on a Citrix XenApp server | 22 |

| | |
|--|-----------|
| Using the Citrix Load balancing server feature with Dragon | 24 |
| Using Citrix Application Isolation Environments with Dragon | 25 |
| Using Dragon on a Citrix XenApp server - Overview | 25 |
| Benefits of this deployment solution | 25 |
| Drawbacks of this deployment solution | 26 |
| Install and deploy Dragon on a Citrix XenApp server | 26 |
| On the Citrix XenApp 7.6 server | 26 |
| On the client computer | 27 |
| Upgrading the Citrix Extension | 27 |
| Publish Dragon from Citrix XenApp servers | 28 |
| Publish Dragon from Citrix XenApp 5, 6, and 6.5 servers | 28 |
| Publish Dragon from Citrix XenApp 7.6 servers | 29 |
| Allow user to customize the audio quality | 30 |
| Managing Dragon update for Citrix logging | 31 |
| Enable sound quality on the client computer | 31 |
| Using Dragon on a Citrix XenApp server with a published application | 32 |
| Citrix User Profile Manager | 34 |
| Chapter 5: Configuring DM Network Edition networks that use virtual servers | 35 |
| Using virtual servers in a DM Network Edition network | 36 |
| Using Virtual Machines for the Local Authenticator and databases | 36 |
| Using Virtual Machines for Profile Optimizer Speech Nodes | 36 |
| Tested virtual machine desktop configurations for Dragon and VMWare | 36 |
| Special Requirements when running Dragon in a virtual environment | 37 |
| System requirements for small networks with virtual servers | 38 |
| System requirements for medium networks with virtual servers | 39 |
| System requirements for large networks with virtual servers | 42 |
| Appendix | 45 |
| System requirements for Dragon | 46 |
| Hardware Recommendations | 46 |
| Software Requirements | 47 |
| Supported Virtual Desktop Infrastructure Applications and Terminal Emulators | 48 |
| Supported non-EHR Applications | 48 |
| Support for Dragon with Citrix clients and servers | 50 |
| Support for Dragon with vSync and Citrix | 50 |
| System requirements for Dragon and Citrix | 50 |
| Applications with Basic Text Control support through vSync | 50 |

Use Dragon on a Citrix XenApp server with a WinTerm device 51
Prepare a WinTerm device for use with Dragon on a Citrix XenApp server 51
Resolving communication issues between EHR in Citrix and Full Text Control .. 52
Glossary 55

Chapter 1: Getting started

This chapter presents information about the new Citrix and vSync related features that are part of Dragon Medical Network Edition.

| | |
|---|----------|
| Getting Started with Dragon and Citrix | 2 |
| Audience for this document | 3 |
| What's new | 4 |

Getting Started with Dragon and Citrix

Audience for this guide

This guide is designed to help system and network administrators plan the network for deployment of the product network. The guide includes details about hardware, software, and network requirements for server-side and client-side components. For information about how to administer the product using the Dragon client, see the product's administrator guide.

Introduction

You can deploy and use Dragon on a computer or Citrix XenApp server, and allow Dragon users to work with applications published from the Citrix XenApp server.

There are different ways you can deploy and use Dragon with Citrix clients and servers. The deployment solution you choose determines the features and functionality that are available to Dragon users.

Audience for this document

The guide contains information about different ways to deploy and use Dragon with Citrix client and server applications. Each section contains information that is of interest to desktop administrators, Citrix XenApp server administrators, Nuance Management Console administrators, or a combination of these audiences.

Dragon on a client computer on page 6 - This section is of interest to desktop administrators if the organization decides to deploy Dragon on client computers.

Dragon on a client computer with vSync on page 10 - This section is of interest to desktop administrators, Citrix XenApp server administrators, and Nuance Management Console administrators if the organization decides to deploy Dragon on client computers and use the vSync feature. This section contains information on components and tasks that involve client computers, the Citrix XenApp server, and the Nuance Management Console.

Dragon published on a Citrix XenApp server on page 22 - This section is of interest to desktop administrators and Citrix XenApp server administrators if the organization decides to deploy Dragon on Citrix XenApp servers. This section contains information on components and tasks that involve client computers and the Citrix XenApp server. A software update needs to be installed on each client computer and this requires the services of a desktop administrator.

What's new

What's new in Dragon Medical Network Edition, 2.5

For information about new features, fixes, and changes, see the Release notes.

Chapter 2: Using Dragon on a client computer

This chapter discusses using Dragon on a client computer, including benefits, drawbacks, system requirements, and installation instructions.

| | |
|---|----------|
| Dragon on a client computer | 6 |
| Install and deploy Dragon on a client computer | 8 |

Dragon on a client computer

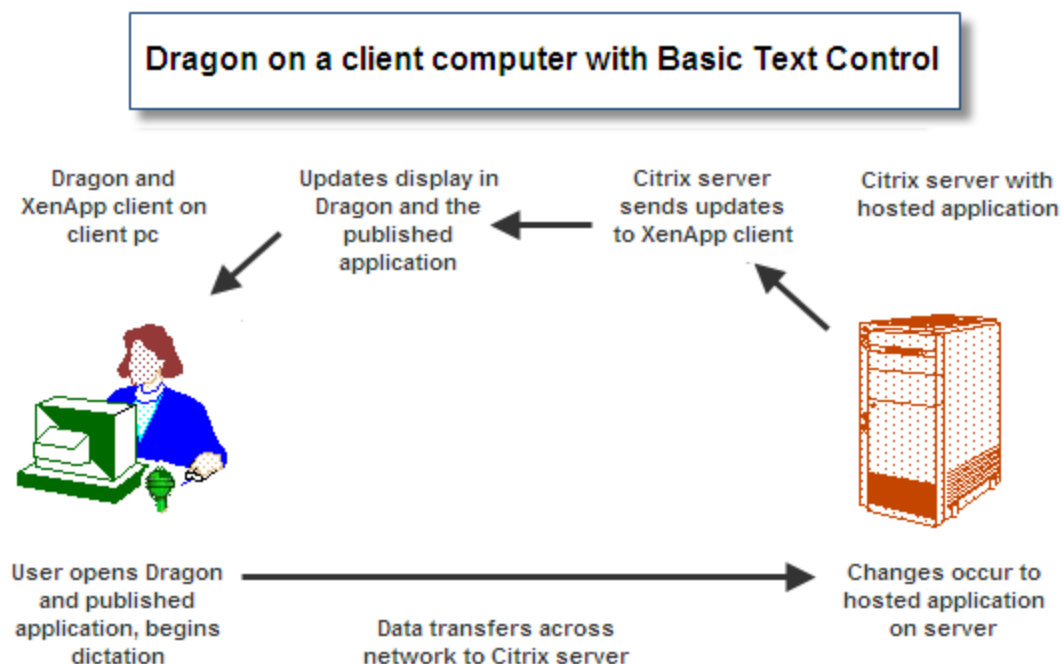
You can install Dragon on a client computer and have the client computer handle all processing activities.

Deploying Dragon on a client computer supports Full text Control with applications that run on the Dragon computer or , if vSync is enabled, with applications published from a Citrix XenApp server.

Deploying Dragon on a client computer only supports Basic Text Control if used with an unsupported edit control or if used with applications published from a Citrix XenApp server and vSync is not enabled. Compatibility module support will not be available. There may also be unexpected results related to formatting of dictated text, such as improper capitalization, and overall accuracy when dictating directly into an EHR published through Citrix. This may require the Dragon user to use the Dictation Box to dictate and correct text when he or she works with an application published from Citrix.

Only Basic Text Control is available if you do not enable the vSync feature in the Dragon client and if you do not install vSync on the Citrix XenApp server.

Installing Dragon on a client computer does not use server resources, unlike other deployment solutions for Dragon.



Dragon features that this deployment solution supports

- Converting speech into text and sending the text to an application.

Benefits of this deployment solution

- You can deploy Dragon at the user or department level without the assistance of a server administrator.
- Dragon uses the CPU and memory resources on client computers without using the CPU and memory resources of Citrix XenApp servers.
- Dictation does not increase the level of network traffic.
- Users do not need to stream high-resolution audio over the network. This reduces the amount of network resources that Dragon uses.
- Users can use Dragon to dictate directly into applications that are installed on the client computer. For example, productivity applications like those in the Microsoft® Office suite.

Drawbacks of this deployment solution

- Dragon users can only use Basic Text Control functionality with a Citrix published application.
- Dictation into free-text fields of an application may not work as expected.
- Automatic capitalization and spelling of text may not work as expected.
- The ability of a user to control an EHR by saying the names of menus and buttons may not work as expected.

Available workarounds

You can use the following workarounds to mitigate some of the restrictions of this deployment solution.

- Dragon users can edit text manually using a keyboard and the computer mouse. This works best for short dictations that contain only a few words.
- Dragon users can use the Dictation Box for dictation and for editing text. Afterwards, the user can transfer the text from the Dictation Box into the EHR system.

Install and deploy Dragon on a client computer

You must perform the following tasks to install and enable Dragon on a client computer.

1. Make sure the system requirements for DM Network Edition are met. See *System requirements for Dragon* on page 46.
2. Install Dragon on a client computer. For more information, see the DM Network Edition Installation guide *Dragon Medical Network Edition Administrator guide*.

Chapter 3: Using Dragon on a client computer with vSync

This chapter discusses using Dragon on a client computer with vSync, including benefits, drawbacks, system requirements, and installation instructions.

| | |
|---|----|
| Dragon on a client computer with vSync | 10 |
| Install and deploy Dragon on a client computer with vSync | 14 |
| Install vSync on a Citrix XenApp server | 15 |
| Enable the vSync Full Text Control option | 15 |
| Viewing vSync log files for Dragon user activity with Citrix published applications | 16 |
| Restoring vSync support after updating a Citrix client | 17 |
| vSync Frequently Asked Questions | 19 |

Dragon on a client computer with vSync

You can install Dragon Medical Network Edition on a client computer and install vSync on the Citrix XenApp server to let Dragon users use full Full Text Control functionality with applications published from a Citrix XenApp server. Full Text Control includes support for voice navigation and text selection. See the *Dragon Help* for more information about the features, options, commands, and controls that the Dragon Medical Client supports.

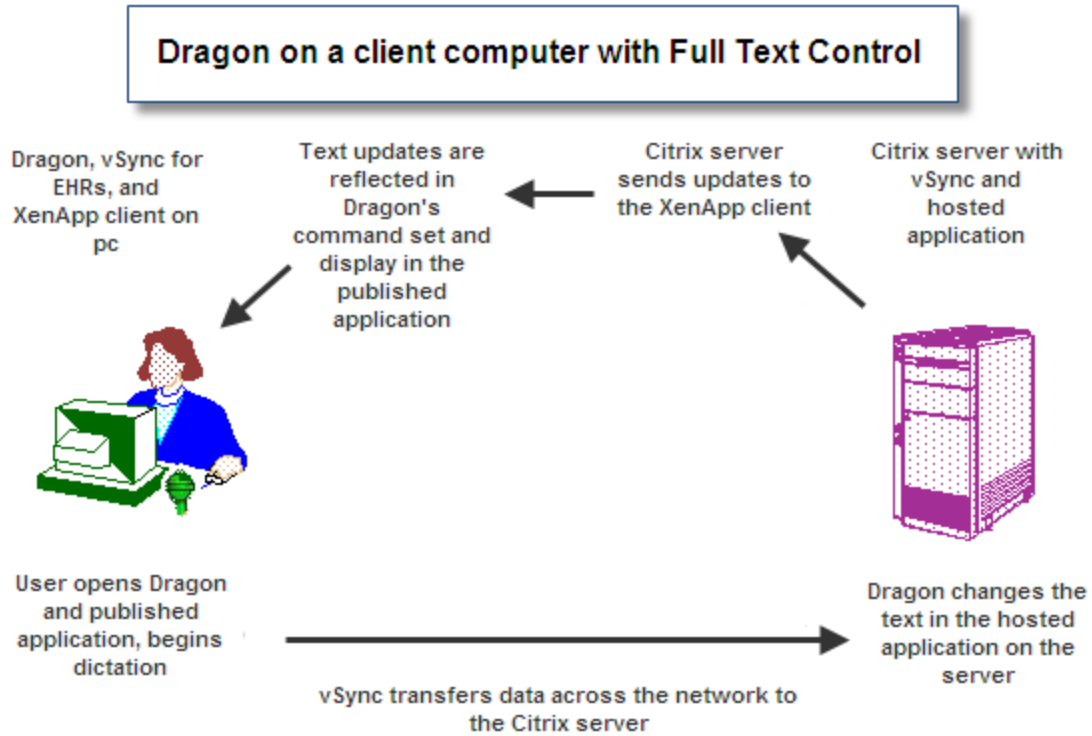
After you set up this configuration, when a Dragon user logs into Dragon with a connection to the server, the user can use Full Text Control functionality with any published application that is on the server.

Issues with Full Text Control may occur

- If you install Dragon and then upgrade the XenApp client
- If you install Dragon and then uninstall and reinstall the XenApp client
- If you install the XenApp client after installing Dragon

If any of the above are true:

- **In Dragon Medical client: you must run the Modify option from the Dragon installation disc to reinstall the vSync for EHRs feature and restore Full Text Control functionality.**



The vSync plug-in

You must install vSync on each Citrix XenApp server where the published applications are located.

The vSync plug-in communicates with Dragon Medical client and allows a user to use Full Text Control functionality with a published application in Citrix.

The vSync plug-in starts automatically when a user starts a Citrix session. The plug-in sends and receives important data from Dragon Medical client, including data about text that Dragon recognizes and text that the user changes manually.

The vSync Full Text Control Support option

For a Dragon user to have Full Text Control support with applications published from a Citrix XenApp server, the vSync Full Text Control Support option must be enabled. This option is turned off by default. An administrator enables this option through the Nuance Management Console.

The vSync Full Text Control support option provides a channel that Dragon Medical client and vSync use to send data to each other. For example, vSync uses the channel to tell Dragon Medical client about events in the Citrix XenApp server window that corresponds to the generic window for a published application on a client computer.

The vSync Full Text Control Support starts when a user starts a published application in Citrix. The vSync Full Text Control support starts communicating with vSync when the user logs into the Dragon Medical client, Dragon receives options data from the Nuance Management Console that indicates the vSync Full Text Control support option is enabled.

Deploying Dragon on a client computer with vSync support

You must perform the following tasks to deploy and enable vSync and the Dragon Medical client on a client computer.

- A desktop administrator must install the Dragon Medical client with the vSync for EHRs feature on a client computer. The installation process for Dragon Medical client installs this feature by default as long as the XenApp plug-in is installed on the client computer. If you install Dragon before you install the XenApp plug-in, you need to perform one of the following actions:
- Run the patch installer – See [Restore vSync after updating a Citrix client on a workstation](#).
- From the Dragon installation DVD, run the Modify option to reinstall the vSync for EHRs feature on Dragon and restore Full Text Control functionality.
- A Citrix administrator must install minitracker for vsync support on the Citrix XenApp server where the published applications are located.
- A Nuance Management Console administrator must enable the **vSync Full Text Control Support** option in the Nuance Management Console to let users with an author account dictate into EHRs that run on Citrix. For more information, see *Enable the vSync Full Text Control option* on page 15

Benefits of this deployment solution

- Dragon users can use Full Text Control functionality, instead of just Basic Text Control functionality, with a published application.
- Small increases in the use of resources on the Citrix XenApp server compared to running Dragon on the Citrix XenApp server.
- Dragon users do not need to use the Dictation Box for dictation. This can reduce the amount of time it takes for the Dragon user to dictate and edit text.

- The learning curve for Dragon users is shorter as they do not need to learn special workarounds.
- Organizations may experience a reduction in technical support calls because Dragon Medical functions as expected.
- An increase in user satisfaction that can lead to an increase in the adoption rate of speech recognition.
- There is no need to transfer audio over the network. Extra network bandwidth is not required for audio. Investment in infrastructure is not required.
- vSync and one Citrix XenApp server can support many concurrent Dragon users. This reduces the need for extra hardware or extra Citrix licenses. You may not need to expand your current network of client computers and servers.

Drawbacks of this deployment solution

- vSync does not support published desktops.
- The solution uses more resources on the Citrix XenApp server compared to running Dragon on the client computer without using the vSync feature and the vSync plug-in.
- A Dragon user cannot say the names of menus and buttons to control the EHR.

Install and deploy Dragon on a client computer with vSync

You must perform the following tasks to install and enable Dragon on a client computer and enable vSync support.

1. Make sure the system requirements for Dragon Medical client are met. See *System requirements for Dragon* on page 46.
2. Install the Dragon Medical Client with the vSync for EHRs feature on a client computer. The DM Network Edition Dragon installation process installs the vSync feature by default as long as the XenApp plug-in is installed on the client computer. If you install Dragon before you install XenApp, you need to uninstall Dragon, restart the computer, and reinstall Dragon. For information about how to install Dragon, see the DM Network Edition Installation guide .
3. Install minitracker for vsync support on the Citrix XenApp server. See *Install vSync on a Citrix XenApp server* on page 15
4. Set up the vSync Full Text Control option. See *Enable the vSync Full Text Control option* on page 15
5. Optional - *Viewing vSync log files for Dragon user activity with Citrix published applications* on page 16

Install vSync on a Citrix XenApp server

The vSync plug-in communicates with the Dragon client. You install the Minitracker application on a Citrix XenApp server to allow Dragon users to use Full Text Control functionality with published applications that are on the server.

1. On the Citrix XenApp server that hosts the published applications, place the Dragon Medical Client disc in to the DVD drive.
2. On the disc, in the root directory of the DVD, find and double-click the minitracker.exe file.
3. On the Welcome screen, click **Next**.
4. On the Destination screen, to select a folder for the installation, click **Change**. Click **Next** to install in the folder.
5. On the Ready to Install Program screen, click **Install** to start the installation process.
6. When the installation process is complete, on the 'InstallShield Wizard Completed' screen, click **Finish**.

Enable the vSync Full Text Control option

To enable Dragon users in Dragon Medical Network Edition with an author account to use Full Text Control functionality with a published application, an administrator must enable the **vSync Full Text Control Support** option using the following procedure:

1. Open the Nuance Management Console.
2. Search for and select a site.
3. In the **Sites** area, click **Details**.
4. Click the **DM360 Network Edition** tab.
5. Expand the **Miscellaneous** section.
6. Select **vSync: Full Text Control**.
7. Click the **Save** button.

Viewing vSync log files for Dragon user activity with Citrix published applications

After you install vSync on a Citrix XenApp server, you can set vSync to create log files that contain data about errors, warnings, or all activities for all vSync users on the server. Once you enable logging, vSync produces a minitracker.log file for every vSync session. By default, vSync logging is not enabled. vSync creates logs files in the following directory on a Citrix XenApp server:

```
C:\Documents and Settings\\Application  
Data\Nuance\NaturallySpeaking12
```

Important note about the size of vSync log files

Only enable vSync logging if you need to provide log files to Nuance Technical Support for troubleshooting. Each log file uses up disk space on the Citrix XenApp server.

If you enable vSync logging, vSync can create many, very large log files. The logs files can use up a lot of disk space on the Citrix XenApp server and increase memory usage on the server.

Note: vSync log file settings are set when vSync starts.

Follow these guidelines for vSync logging:

- Only enable vSync logging to track and troubleshoot specific issues
- Enable vSync logging during a time when network usage is at a minimum.
- When you no longer require the log files, quickly disable the logging feature.

To enable vSync logging for all Dragon users that work with Citrix published applications

In the Windows registry, perform one of the following actions.

| Action | Steps |
|---|---|
| Disable vSync logging for all users | Set the HKLM\Software\Nuance\LogLevel (DWORD) key to 0. |
| Enable vSync logging of errors for all users | Set the HKLM\Software\Nuance\LogLevel (DWORD) key to 1. |
| Enable vSync logging of errors and warnings for all users | Set the HKLM\Software\Nuance\LogLevel (DWORD) key to 2. |
| Enable vSync logging of all data for all users | Set the HKLM\Software\Nuance\LogLevel (DWORD) key to 3. |

Restoring vSync support after updating a Citrix client

Dragon uses vSync support to provide Dragon users with Full Text Control when they work with applications published from a Citrix XenApp server. An administrator updates or reinstalls one or more Citrix clients on a workstation with Dragon.

Updating or reinstalling a Citrix client deletes the Dragon vSync components; disabling vSync support.

The vSync Restoration Patch provides a quick and simple way to reinstall vSync support after updating or re-installing a Citrix client. After updating or reinstalling a Citrix client on a workstation, run the patch on the workstation or push the patch install to the workstation.

In Dragon Medical Network Edition, only use the vSync Restoration Patch to repair damaged vSync client components or to install the vSync client components for the first time.

To upgrade vSync client components, use the patch installer. Do not use the vSync Restoration Patch to upgrade these components.

Note: You must upgrade vSync on your Citrix XenApp servers before you upgrade vSync on Dragon client computers.

The patch can be run on a 32-bit or 64-bit workstation where all, some, or none of the vSync components are installed. The patch installer can also be run in 'silent' mode.

When you run the patch installer, it successfully patches and re-registers the relevant dll and component files. The installer also displays messages about installation success or errors.

You can run or push the vSync Restoration Patch using any version of the DM Network Edition Dragon client Service Pack 1 (Build 10.50.650.033) or higher. If you do not have Service Pack 1, you must install it before you can install the patch.

Pre-requisites for installing the DM Network Edition vSync Restoration Patch

Ensure the following items are met before you run the patch. Otherwise, the patch installation will fail and log error messages to the DgnSetup log file.

- The Dragon client must be installed on the workstation
- Dragon must not be running on the workstation

- A Citrix client must be installed on the workstation
- Citrix process (wfica32.exe, wfcrun32.exe, Receiver.exe, SelfServicePlugin.exe, concentr.exe) must not be running on the workstation

You can install the patch even if the vSync components in the patch are the same version as the vSync components currently installed on the workstation.

Steps for installing the DM Network Edition vSync Restoration Patch on a workstation

Perform the following steps after updating or reinstalling a Citrix client on a workstation.

1. Ensure all the installation pre-requisites are met. See [Pre-requisites for installing the vSync Restoration Patch](#) for details.
2. On the DVD, in the VsyncRestorationPatch folder, find and run the vSyncRestorer.exe file on the Dragon client workstation. Alternately, you can push the patch install to the workstation.

vSync Restoration Patch Logging

When you run the vSync Restoration Patch, it logs success and error messages to the DgnSetup log. It also logs the version numbers of the currently installed Citrix support components and the components in the patch.

vSync Frequently Asked Questions

| Question | Answer |
|--|---|
| In a Citrix session with an application published from a Citrix server, does vSync open a virtual channel on the application connection (Citrix Session) or does vSync open its own session? | vSync opens a new virtual channel on the application connection (Citrix Session). |
| What Citrix protocol does the vSync traffic use? Does it use the Audio protocol of Citrix? | The low level protocol is transparent. All recognition data and audio data is processed on the local machine and is not transmitted to or from the local machine. |
| When using Dragon on a local machine to dictate into an electronic health record (EHR) system over a Citrix connection, do you recommend a wired or wireless connection? | <p>A wired connection is recommended. This is about managing a real-time process (recognition and coordination with an application) between two computers across a network.</p> <p>A Wireless connection will work but could produce latency issues and even dropped signals. A wired connection is more reliable.</p> |
| Does working in offline mode improve recognition? | <p>Offline mode does not impact recognition. Offline mode impacts synchronization between the local user profile and the master profile on the server.</p> <p>All recognition occurs on the local machine that runs the Citrix client.</p> |
| <p>How many occurrences of the following message in a Dragon.log file (per user session, per day) indicates a problem with vSync? .</p> <p>"CtxWinMgr: GetServerWindowInfo - Window info request failed (result, elapsed time, timeout) = (258, 2000, 2000)"</p> | <p>This is no quick answer to this question because the answer also depends on:</p> <ul style="list-style-type: none"> - what else is logged in the Dragon and minidragon log files. - the network specification and configuration - the hardware and software of the server - how many people are using or accessing the server resources consumed by the application that is being queried - other factors <p>As a VERY GENERAL rule of thumb, all timeout entries in a Dragon log should not exceed 1 to 2 percent of all dictations.</p> |

Chapter 4: Using Dragon on a Citrix XenApp server

This chapter discusses using Dragon published on a Citrix XenApp server, including benefits, drawbacks, system requirements, and installation instructions.

| | |
|---|----|
| Dragon published on a Citrix XenApp server | 22 |
| Install and deploy Dragon on a Citrix XenApp server | 26 |
| Publish Dragon from Citrix XenApp servers | 28 |
| Allow user to customize the audio quality | 30 |
| Managing Dragon update for Citrix logging | 31 |
| Using Dragon on a Citrix XenApp server with a published application | 32 |
| Citrix User Profile Manager | 34 |

Dragon published on a Citrix XenApp server

You can install Dragon on a Citrix XenApp server computer and have Dragon rely on the Citrix XenApp server for all processing activities.

Deploying Dragon on a Citrix XenApp server provides Dragon users with Full Text Control support in their EHR system when the EHR is deployed on a Citrix XenApp server, so they do not have to use the Dictation Box.

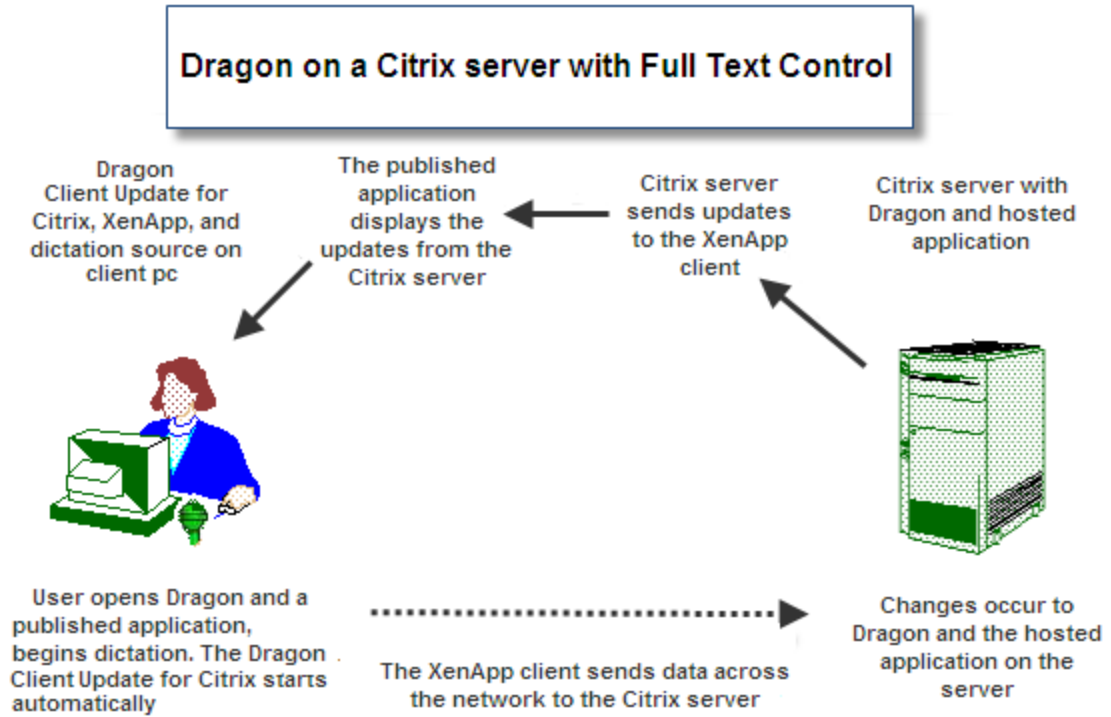
If Dragon and the EHR are hosted on the same XenApp server:

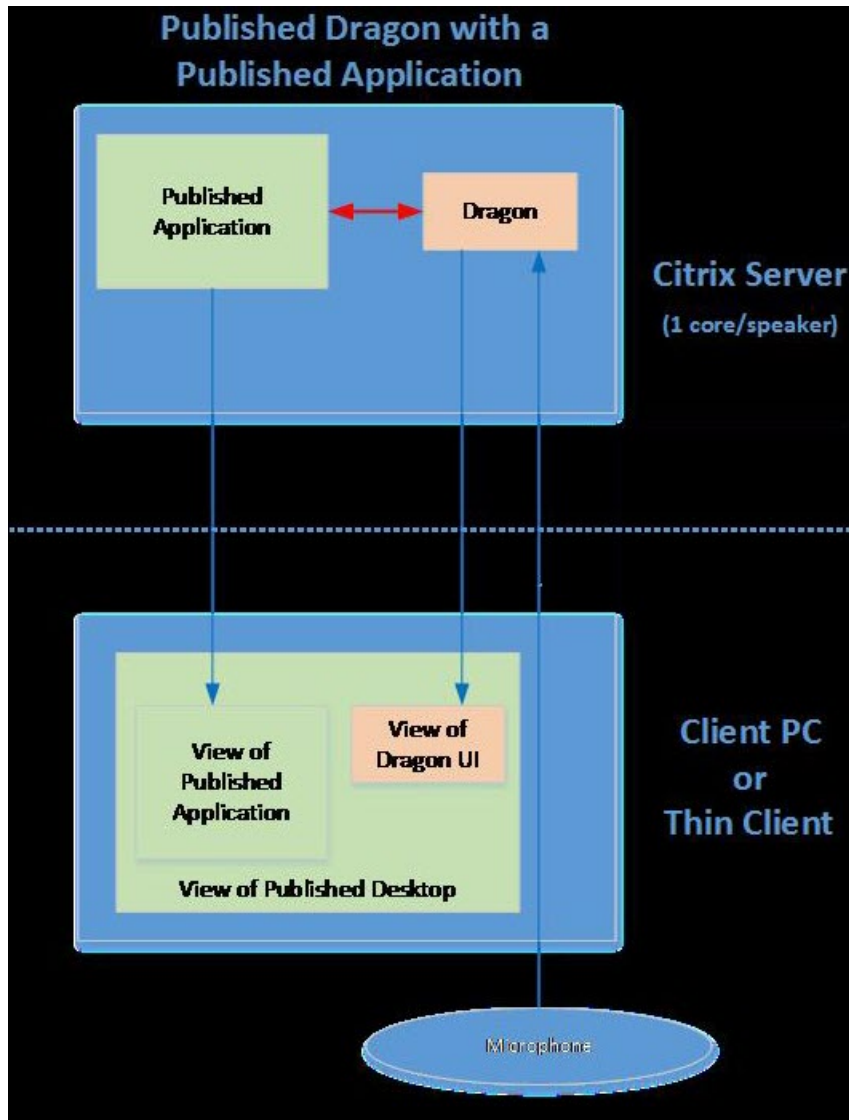
- You can publish each application or the desktop and get full text control to dictate into the EHR.

If Dragon is hosted on a different XenApp server than the EHR:

- You must publish the desktop where Dragon is hosted from.
- You must install minitracker on the XenApp server that hosts the EHR.
- You must launch the EHR published application from the published desktop where Dragon is hosted from.

This configuration uses more memory and CPU resources on the server than other Dragon/Citrix configurations.





Using the Citrix Load balancing server feature with Dragon

If you use the Citrix Load balancing server feature, make sure that you run Dragon and a published application from the same server. Attempting to use the Load balancing server feature to run Dragon from a server that is different from the server that hosts a published application may cause Dragon to not work as expected with the published application.

Check the configuration of the Load Manager or disable automatic load balancing in a multi-server farm.

Using Citrix Application Isolation Environments with Dragon

If you use the Citrix Application Isolation Environments server feature, make sure to launch Dragon and a published application from the same application isolation environment. Dragon may not communicate correctly with the published application if they are launched from separate environments.

Using Dragon on a Citrix XenApp server - Overview

The following is an outline of how a user can use Dragon once the steps for deploying Dragon on a Citrix XenApp server are completed.

Note:

To allow users to use Dragon with published applications, you must install Dragon on the same server cluster as the published applications. You must also install vddnspatch2.exe on the client computer. See [Install the Dragon update for Citrix](#) for details.

-
- Set up a microphone on a client computer that is running the Citrix Receiver and on which the **Dragon update for Citrix** is installed.
 - On the client computer, launch Dragon and the published application you want to dictate into.
 - Use the microphone to dictate into the published application.
 - The audio from the microphone travels across the network to Dragon running on the Citrix XenApp server.
 - The published application on the Citrix XenApp server receives dictation text, corrections, and other changes from Dragon running on the Citrix XenApp server.
 - The changes from Dragon and the published application on the Citrix XenApp server synchronize with what the Dragon user sees on the client computer.

Benefits of this deployment solution

- Dragon users can dictate from client computers that do not have Dragon installed.
- Dragon users make use of the same Dragon functionality that is available when both Dragon and an EHR system run on the same client computer. This can reduce the need for special end-user training.
- Administrators can use the Citrix management console to control which Dragon users have access to Dragon.

- The amount of time and effort required to install Dragon on each client computer can be greatly reduced or even eliminated.
- Administrators only need to install a .dll file, the **Dragon update for Citrix**, and the Citrix client extension, onto each client computer.

Drawbacks of this deployment solution

- Increased CPU usage and processing requirements on the Citrix XenApp server
- **If the user is using an analog microphone:** The client computer must transfer high-resolution audio data to the Citrix server. Each Dragon user requires 1.3 Mbps of network bandwidth whenever the microphone is turned on. Users may not be able to use Dragon from a remote workstation that has a slow internet connection, or on a network with many Dragon users performing dictation simultaneously.
If the user is using a USB microphone: Each Dragon user requires less than 1.3 Mbps of network bandwidth.
- Users cannot use Dragon to dictate directly into applications that run on a client computer. As a workaround, users can use the Dictation Box to perform dictation. Afterwards, users can copy and paste the dictation text into the application that is running on the client computer.

Install and deploy Dragon on a Citrix XenApp server

You must perform the following tasks to install and enable Dragon on a Citrix XenApp server.

On the Citrix XenApp 7.6 server

You must not install Dragon and the vSync plug-in on the same server. However, you can install Dragon and the vSync plug-in on different servers in the same server farm.

1. Make sure the system requirements for Dragon are met. See *System requirements for Dragon* on page 46.

Special Requirements when running Dragon as a published application on XenApp or XenDesktop:

- Only use BestMatch IV speech models.
- The Dragon (natspeak.exe) process requires 1.1GB of RAM
- Each active speaker requires a single (non-hyper-threaded) core

2. Install Dragon on the server. For more information, see the DM Network Edition Installation guide the Dragon Medical Network Edition Administrator guide.
3. To enable support for the PowerMic, on the DVD, navigate to the Citrix Server & Virtual Desktop Extension folder. Double-click the PowerMic Citrix Server & Virtual Desktop Extension.exe file.

On the client computer

1. Install Citrix receiver 4.3. For details, refer to your Citrix product documentation.
2. Make sure the Citrix XenApp client is installed on each client computer.
3. On each computer where the Citrix XenApp client is installed, insert the Dragon DVD, navigate to the Citrix Extension folder, and double-click vddnspatch2.exe. This action runs the vddnspatch2.exe file on the client computer.
4. To enable support for the PowerMic, on the Dragon DVD, navigate to **Citrix Extension > Citrix Client Extension** folder. Double-click the PowerMic Citrix Extension Client.msi.
5. [Enable sound quality on the client computer](#).
6. Create policies to allow users to use Dragon on the Citrix XenApp server. See *Allow user to customize the audio quality* on page 30.

Configuring this Dragon solution

- See *Using Dragon on a Citrix XenApp server with a published application* on page 32
- See *Managing Dragon update for Citrix logging* on page 31

Upgrading the Citrix Extension

1. For PowerMic support, run the new vddnspatch2.exe file on the client machine. The vddnspatch2.exe file does not perform an upgrade if the old vddnspatch.exe file is installed on the machine. (Optional) Uninstall the old version of vddnspatch.exe or vddnspatch.msi from the client operating systems with the pre-installed Citrix receiver.
2. If you will be using a PowerMic, install the PowerMic Citrix Extension Client.msi file on all of the client operating systems with the pre-installed Citrix receiver.
3. Repeat steps 1 and 2 until vddnspatch2.exe and the Citrix Client Extension are installed on all of the client operating systems with the pre-installed Citrix receiver.
4. On the XenApp Server, upgrade the product. If you will be using a PowerMic, install the Citrix Server Extension. Navigate to the Citrix Server & Virtual Desktop Extension directory in your installation files and double-click the PowerMic Citrix Server & Virtual Desktop Extension.exe file.

Publish Dragon from Citrix XenApp servers

You must publish Dragon to allow the Citrix Receiver to see and display Dragon.

Note: Before you perform the following procedure, make note of the location of the Dragon installation directory on the server.

Perform the following steps on the Citrix server:

Publish Dragon from Citrix XenApp 5, 6, and 6.5 servers

1. For XenApp 6.5: From the **Start** menu, go to **Administrative Tools > Citrix > Management Consoles > Citrix AppCenter**.

For XenApp 6: From the **Start** menu, go to **All Programs > Citrix > Management Consoles > Citrix Delivery services Console**.

For XenApp 5: From the **Start** menu, go to **All Programs > Citrix > Management Consoles > Access Management Console**.

2. In the left pane, under **XenApp**, under the Farm where you installed Dragon, select the **Applications** folder.
3. On the menu bar, select **Action > Publish application**.
4. Click **Next**.
5. Enter a display name and an application description for Dragon and click **Next**.
6. Select the **Application** option.
7. Select the **Accessed from a server** option.
8. In the **Server application type** field, select **Installed application** and then click **Next**.
9. In the **Command line** field, specify *natspeak.exe* as the executable file. By default, the Dragon application installs into the following directory: C:\Program Files\Nuance\NaturallySpeaking\Program\natspeak.exe
10. Click **Next**.
11. Click **Add** and select the Citrix XenApp server that Dragon is installed on.
12. Click **Add**.

13. Click **OK** and then click **Next**.
14. Select the **Allow only configured users** option and click **Add**.
15. In the **Select Users or Groups** dialog, specify the users that can access Dragon by selecting them and clicking **Add**.
16. Click **OK**.
17. Click **Next**.
18. On the **Shortcut presentation** screen, specify the appearance and placement of the shortcut icon for Dragon and then click **Next**.
19. Click **Finish**.

Publish Dragon from Citrix XenApp 7.6 servers

1. From the **Start** menu, go to **Administrative Tools > Citrix > Management Consoles > Citrix Studio**.
2. In the left pane, under **XenApp**, under the Farm where you installed Dragon, select the **Delivery groups** folder.
3. In the center pane, select **Applications** tab.
4. In the right pane, click **Create Application**.
5. In create Application wizard on first screen (introduction) click **Next**.
6. On **Delivery Group** step select delivery group you need and click **Next**.
7. On **Applications** step select Network Edition application (if not present in list add it manually by pressing **Add applications manually...** button) and click **Next**.
8. On Summary step click **Finish**.

Allow user to customize the audio quality

Allow users to customize the audio quality for the web interface

1. Open the Citrix Access Management Console.
2. For XenApp 6 and 6.5: From the **Start** menu, go to **All Programs > Citrix > Management Consoles > Citrix Web interface management**.

For XenApp 5: From the **Start** menu, go to **Administrative Tools > Citrix > Management Consoles > Citrix AppCenter**.

3. For XenApp 6 and 6.5: In the left pane, go to **Citrix Web Interface > XenApp Web Sites > Site name** (the name of your Citrix farm).

For XenApp 5: In the left pane, go to **Citrix Resources > Configuration Tools > Web Interface > Site name** (the name of your Citrix farm).

4. For XenApp 6 and 6.5: In the **XenApp - Edit Settings** window, click **Session Settings**.

For XenApp 5: In the **Common Tasks** window, select **Manage session preferences**.

5. In the **Remote Connection** section, select **Connection Performance**.
6. For XenApp 5 and 6: Select **Allow users to customize audio quality**.

For XenApp 6.5: Select **Allow users to customize sound**.

7. Click **OK**.

Set the audio quality to high

1. From the **Start** menu, go to **Administrative Tools > Citrix > Management Consoles > Citrix AppCenter**.
2. In the left pane, under **XenApp**, under the Farm where Dragon is installed, select **Policies**.
3. In the lower part of the screen, click the **Settings** tab.
4. In the **Settings** area, beside **Audio quality**, click **Add**.
5. In the **Add Setting** screen, in the **Value** drop-down list, select **High – high definition audio**.
6. Under Group Policy, navigate to **Administrative Templates > Citrix Components > Citrix XenApp Plugin for Hosted Apps > User Experience > Client audio settings**.
7. Change group policy setting from **Not Configured** to **Enabled**, and click **Apply**.

8. Check **Enable audio**.
9. In the **Sound quality** drop-down list, select **High**.
10. Click **Apply**.
11. Click **OK**.
12. From a command prompt, run the `gpupdate /force` command, to ensure that the policy is correctly applied.

Managing Dragon update for Citrix logging

This topic only applies if you install Dragon on a Citrix XenApp server.

When you start a **XenApp** session, the **XenApp plug-in** starts and loads the **module.ini** file from the root folder of the Citrix client. This **module.ini** file contains a list of the parameters used to select and configure the communications stack modules including the **Dragon update for Citrix**.

1. To save space on the Citrix client, you can disable or redirect Citrix logging:
2. Open the **module.ini** file. By default, the **module.ini** file is located in the Citrix client directory:
 - C:\Program Files\Citrix\ICA Client on Windows XP.
 - C:\Program Files (x86)\Citrix\ICA Client on Windows 7, 8.x, or 10.
3. To disable logging: Go to the **[VDDNS]** section and change the line **LogLevel=2** to **LogLevel=0**
4. To redirect logging to another location or device: Go to the **[VDDNS]** section and change the path in the line.
5. Save and exit the **module.ini** file.

Enable sound quality on the client computer

After you install the **Dragon update for Citrix** on a client computer and before a user starts *Dragon* as a published application, you must enable sound on the client computer. You must enable sound on each client computer that users dictate from.

Perform the following steps on each client computer that users will use for dictation with *Dragon* that is installed on a Citrix XenApp server.

Enable sound quality for the Citrix XenApp 11.x or 12.x web client

1. Log into the XenApp web client.
2. Under **Preferences**, select **Session Settings**.
3. In the **Performance** section, in the **Sound** drop-down list, select **High - high definition audio**.
4. Click **Save**.

Enable sound quality for the Citrix program neighborhood for the Citrix Receiver 3.x, 4.0, 4.2, and 4.3 client

1. Right click on Citrix Icon and select **About -> Advanced -> Online Plug-In Settings> options -> Session Options -> Audio Quality**.
2. Select high sound quality.
3. Click **Save**.

Notes:

- If you publish *Dragon* on a Citrix XenApp server that has the audio quality set to low, if the sound on the client computer is set to high, the client computer may not receive an audio quality warning when you start *Dragon*.
 - There must be a sound system on the client computer. For example, if USB audio is disabled on the client computer, a user cannot create a user profile. Enable USB audio on the client computer and re-connect to the Citrix XenApp server.
-

Using Dragon on a Citrix XenApp server with a published application

To allow users to run a published installation of Dragon with another published application like Microsoft Word or an EHR application, you must publish both applications so that they run in a single Citrix client session.

Use the following guidelines to make sure all published applications work together.

Administrator guidelines for using Dragon on a Citrix XenApp server

Use one of the following approaches to provide users with access to applications:

- In Citrix, publish the desktop and let users start applications from the published desktop.
- In Citrix, use identical settings to publish all the applications that a user requires. If the settings are not identical, *Dragon* may not operate correctly with other applications that you publish. For example, if the settings you use to publish Microsoft Word are different from the settings you use to publish *Dragon*, the microphone hotkey will not work when Microsoft Word is the active application, and the *Dragon* user cannot dictate text into Microsoft Word.

User guidelines for using *Dragon* on a Citrix XenApp server

The following guidelines apply if you publish separate applications and do not publish a Desktop.

- Users should not change ***Application Set*** settings when they run a published application.
- When you enable the Citrix feature, ***Smooth Roaming***, with published applications that are on multiple computers, users should perform one of the following actions:
 - Close all published applications before moving to a new location.
 - Start published applications in the same order on all the computers that you use. For example, if you run a published Microsoft Word application or EHR application on a computer, to work in the same session when you move to a new computer, start Microsoft Word or the EHR application on the new computer before you start another published application like *Dragon*. This allows the published *Dragon* application to run in the same session as the published Microsoft Word or the EHR application .

Citrix will start published applications in separate sessions when:

- The applications are published with different settings (***Colors, Enable Legacy Audio, Encryption, Allow Only Configured Users***). Citrix places applications into separate Windows sessions if the color settings are different. Using different settings may cause problems with dictation.
 - You publish even one application as a Desktop.
 - The Citrix client does not start the application in ***Seamless*** mode.
 - A Citrix client launches one application, changes ***Application Set*** settings, and then launches another application.
 - A user starts different applications from different computers. If a user starts the same application from a different computer, it connects to the same Citrix client session and disconnects the previous session, as in the ***Smooth Roaming*** feature.
-

Citrix User Profile Manager

Many organizations employ Citrix User Profile Manager to manage the Windows profiles of users. The Citrix User Profile Manager is commonly used in both XenApp and XenDesktop environments.

When the Citrix User Profile Manager is used, whether Dragon is installed on a client Workstation along with the vSync client and the minidragon service is installed on the Citrix XenApp server, or whether Dragon is installed directly on the Citrix XenApp server, please follow these guidelines.

- Disable Active Write Back in Citrix User Profile Manager
- Disable Profile Streaming in Citrix User Profile Manager

OR

- Exclude C:\USERS\%USERNAME%\APPDATA\ROAMING\NUANCE from Citrix User Profile Manager

Chapter 5: Configuring DM Network Edition networks that use virtual servers

This chapter presents information about different configurations for Dragon Medical Network Edition networks that primarily use virtual servers.

| | |
|---|----|
| Using virtual servers in a DM Network Edition network | 36 |
| Special Requirements when running Dragon in a virtual environment | 37 |
| System requirements for small networks with virtual servers | 38 |
| System requirements for medium networks with virtual servers | 39 |
| System requirements for large networks with virtual servers | 42 |

Using virtual servers in a DM Network Edition network

To use virtual machines in your Dragon Medical Network Edition network configuration, you should be deploying at least a medium-sized configuration —one with the Profile Optimizer Speech Nodes on a separate physical server or workstation.

Using Virtual Machines for the Local Authenticator and databases

You can choose to generate medium or larger configurations using virtual machines for the and databases: Hardware, operating system, and software requirements remain the same on virtual machines.

Using Virtual Machines for Profile Optimizer Speech Nodes

You can have each *Profile Optimizer Speech Node* on its own virtual machine as long as the physical workstation or server for that virtual machine has two full cores for each *Speech Node*. On a dual-core machine, you can have one *Speech Node*; on a quad-core machine, you can have two *Speech Nodes* each on its own virtual machine.

Tested virtual machine desktop configurations for Dragon and VMWare

| Operating system | Hardware Configuration |
|-------------------------------|---|
| Windows 7 Professional 64-bit | 1 vCPU <ul style="list-style-type: none">• 4 GB memory• 1 Ethernet card (e1000 driver)• 32 GB storage (vmdk only) |

Special Requirements when running Dragon in a virtual environment

Make sure the system requirements for Dragon are met. See System requirements for the Dragon Client.

Only use BestMatch IV speech models.

The Dragon (natspeak.exe) process requires 1.1GB of RAM

Each active speaker requires a single (non-hyper-threaded) core

System requirements for small networks with virtual servers

Use the following system requirements as guidelines when you set up a network for up to 100 users.

- **Single Quad-Core physical or virtual server**

- **One Quad-Core Server** for Local Authenticator, , and One Speech Node.

- **Hardware and Software**

For this configuration, you need a more robust server machine than you would require for an installation distributed over several machines.

- **Processor:** Quad-Core 2 GHz CPU
- **Operating System:**
 - Windows Server 2008 or with SP2 (optional), 32- or 64-bit version
 - Windows Server 2012
 - Windows Server 2012 R2
- **Microsoft .NET:**
 - Microsoft .NET Framework 4.5
- **Minimum RAM:** 4 GB is recommended
- **Core Application Disk Storage:**
40 GB for the Operating system
- **Maximum Number of Speech Nodes:** One Profile Optimizer Speech Node that uses two full cores of the CPU. Must be on a Virtual Machine if deployed on a single server.
- **Minimum and Maximum Number of Users:** 10 to 100 dictating users
- **Master User Profile Storage:** 2.1 GB per user/dictation device is required for the master user profiles. Storage can be on the server, on another file store, a storage array, or on a storage area network (SAN).

System requirements for medium networks with virtual servers

Use the following system requirements as guidelines when you set up a network for 100 to 1000 users.

- **First Server (Dual vCPU):** Local Authenticator,
- **Additional Servers (1 per 250 Users) :** Speech Node
- Master User Profiles Directory on first server or on a separate Windows server or Distributed File System (DFS)
- **First server requirements:**
 - **Processor:** 2 vCPU's
 - **Operating System:**
 - Windows Server 2008 or R2, 32 bit or 64 bit
 - Windows Server 2012
 - Windows Server 2012 R2
 - **Microsoft .NET**
 - Microsoft .NET Framework 4.5
 - **Minimum RAM:** 4 GB RAM, 8 GB if SQL installed on the server
 - **Core Application Disk Storage:** 40 GB includes 14 GB for the Operating system
- **Second server (Speech Nodes 1 per 250 Users) requirements**
 - **Processor:** 2 vCPU
 - **Operating System:**
 - Windows 10, 32-bit or 64-bit
 - Windows 8.1, 32-bit or 64-bit
 - Windows 8, 32-bit or 64-bit
 - Windows 7, 32-bit or 64
 - Windows XP, 32-bit or 64
 - Windows Server 2012
 - Windows Server 2012 R2
 - Windows Server 2008, 32-bit or 64-bit

Windows Server 2008 R2: On all machines where Speech Nodes run on Windows Server 2008 R2 (with or without Service Pack 1), download and apply

the following patch:

http://hotfixv4.microsoft.com/Windows%207/Windows%20Server2008%20R2%20SP1/sp2/Fix392120/7600/free/445413_intl_x64_zip.exe

Please see the following Microsoft Support articles for information about why this hot fix is necessary for reliable operation of a Speech Node on Windows Server 2008 R2:

<http://support.microsoft.com/kb/2687753>

<http://support.microsoft.com/kb/2624677>

<http://support.microsoft.com/kb/2584874>

- **Microsoft .NET** : Microsoft .NET Framework 4.5

- **Minimum RAM:**

1 GB RAM for Windows XP

2 GB RAM for:

- Windows XP
- Windows Vista SP2
- Windows 7
- Windows 8
- Windows 10
- Windows Server 2008
- Windows Server 2012
- Windows Server 2012 R2

- **Hard Disk Space:**

20 GB for Windows XP

30 GB for:

- Windows Vista SP2
- Windows 7
- Windows 8
- Windows 10
- Windows Server 2008
- Windows Server 2012
- Windows Server 2012 R2

- **Master User Profile Storage:** 2.1 GB per user/dictation device is required for the master user profiles. Storage can be on the first server, a storage array, or on a storage area network (SAN). For a SAN configuration, Fiber Channel connectivity to the server running the Profile Optimizer Speech Nodes is preferred to reduce network usage.

System requirements for large networks with virtual servers

Use the following system requirements as guidelines when you set up a network for more than 1000 users.

- **One Database Server** for a customer SQL cluster
- **One Speech Node:** one node for every 250 users
- **Database server: Database server hardware requirements and limitations**
 - **Processor:** 2 vCPU or Existing SQL Cluster
 - **Operating System:**
 - Windows Server 2008, R2, or SP2 (optional), 32- or 64-bit version
 - Windows Server 2012
 - Windows Server 2012 R2
 - **Minimum RAM:** 4 GB RAM, 8 GB is recommended
 - **Approximate Disk Storage:** 40 GB
- **Speech Nodes: (Speech Nodes 1 per 250 Users)**
 - **Processor:** 2 vCPU
 - **Operating System:**
 - Windows 10, 32-bit or 64-bit
 - Windows 8.1, 32-bit or 64-bit
 - Windows 8, 32-bit or 64-bit
 - Windows 7, 32-bit or 64-bit
 - Windows Vista, 32-bit or 64-bit
 - Windows XP, 32-bit or 64-bit
 - Windows Server 2008 or R2, 32-bit or 64-bit. On all machines where *Speech Nodes* will run on Windows Server 2008 R2 (without Service Pack 1), download and apply the following patch:
http://hotfixv4.microsoft.com/Windows%207/Windows%20Server2008%20R2%20SP1/sp2/Fix387409/7600/free/441462_intl_x64_zip.exe

Please see the following Microsoft Support articles for information about

why this hotfix is necessary for reliable operation of a Speech Node on Windows Server 2008 R2:

- <http://support.microsoft.com/kb/2624677>
- <http://support.microsoft.com/kb/2687753>

- Windows Server 2012
- Windows Server 2012 R2
- **Microsoft .NET:**
 - Microsoft .NET Framework 4.5

- **Minimum RAM:**

1 GB RAM for Windows XP

2 GB RAM for:

- Windows Vista
- Windows 7
- Windows 8
- Windows 10
- Windows Server 2008
- Windows Server 2012
- Windows Server 2012 R2

- **Hard Disk Space:**

20 GB for Windows XP

30 GB for:

- Windows Vista
- Windows 7
- Windows 8
- Windows 10
- Windows Server 2008
- Windows Server 2012
- Windows Server 2012 R2

- **Minimum and Maximum Number of Users:** Over 1000 dictating users

- **Master User Profile Storage:** 2.1 GB per user/dictation device is required for the master user profiles. Storage can be on the first server, a storage array, or on a storage area network (SAN). For a SAN configuration, Fiber Channel connectivity to the server running the Profile Optimizer Speech Nodes is preferred to reduce network usage.

Appendix

| | |
|--|----|
| System requirements for Dragon | 46 |
| Hardware Recommendations | 46 |
| Software Requirements | 47 |
| Supported Virtual Desktop Infrastructure Applications and Terminal Emulators | 48 |
| Supported non-EHR Applications | 48 |
| Support for Dragon with Citrix clients and servers | 50 |
| Support for Dragon with vSync and Citrix | 50 |
| System requirements for Dragon and Citrix | 50 |
| Applications with Basic Text Control support through vSync | 50 |
| Use Dragon on a Citrix XenApp server with a WinTerm device | 51 |
| Prepare a WinTerm device for use with Dragon on a Citrix XenApp server | 51 |
| Resolving communication issues between EHR in Citrix and Full Text Control | 52 |

System requirements for Dragon

For information about support for Dragon and vSync with different Citrix components and different operating systems, see [Support for Dragon and vSync with Citrix clients and server](#).

Hardware Recommendations

Dragon Client Hardware Recommendations

CPU: 2.4 GHz Intel Dual Core or equivalent AMD processor. (IMPORTANT: SSE2 instruction set required)

Processor Cache: 2 MB

DVD-ROM: drive required for installation

Sound Card: Creative® Labs Sound Blaster® 16 or equivalent sound card supporting 16-bit recording.

Free hard disk space: 5 GB required, 8 GB recommended

RAM:

2 GB for:

- Microsoft® Windows XP®
- Microsoft® Windows Vista®

4 GB for:

- Microsoft® Windows® 10, 32-bit and 64-bit
- Microsoft® Windows® 8 and 8.1, 32-bit and 64-bit
- Microsoft® Windows® 7, 32-bit and 64-bit
- Microsoft® Windows Vista®, 32-bit and 64-bit
- Windows Server 2012, 64-bit R2.
- Windows Server 2008, 64-bit, Windows Server 2012 64-bit

Microphone: Nuance-approved microphone (included in purchase)

For details on Bluetooth microphones, recorders, Tablet PCs, and other hardware, please go to <http://support.nuance.com/compatibility/>.

You can also use an iOS or Android device as a microphone using the [Dragon Remote Microphone app](#).

Bluetooth (Optional): For Bluetooth wireless microphone support, visit <http://support.nuance.com/compatibility/>

Web Connection: A web connection is required for activation during installation.

Software Requirements

Software Requirements for the Dragon Client

The Dragon Client installer checks your system for minimum requirements. If the minimum requirements are not met, the installer will not install the client.

Operating system:

- Microsoft® Windows® 10 (including Professional and Enterprise), 32 bit and 64 bit
- Microsoft® Windows® 8.1, 32 bit and 64 bit
- Microsoft® Windows® 8 (including Professional and Enterprise), 32 bit and 64 bit
- Microsoft® Windows® 7, 32-bit and 64-bit
- Microsoft® Windows® Vista® Service Pack 2, 32 bit and 64 bit
- Microsoft® Windows XP® Service Pack 3, 32-bit only
- Microsoft® Windows Server 2008, Service Pack 1, Service Pack 2
- Microsoft® Windows Server 2008 R2, 32-bit and 64-bit
- Microsoft® Windows Server 2008 R2 64 bit Service Pack 2
- Microsoft® Windows Server 2012
- Microsoft® Windows Server 2012 R2

Software Requirements for the Profile Optimizer Nodes

Operating system:

Choose one of the following:

- Microsoft® Windows 7
- Microsoft® Windows Server 2008, Service Pack 1, Service Pack 2
- Microsoft® Windows Server 2008 R2, 32-bit and 64-bit
- Microsoft® Windows Server 2012

Whichever operating system you choose, you should have all service packs installed, up to the

most current one.

Microsoft .NET:

- Microsoft .NET Framework 4.5

SQL Server

Choose one of the following:

- SQL Server 2008
- SQL Server 2012
- SQL Server 2014

Windows Installer 3.1 If you are installing a *Speech Node* on a machine with any supported operating system other than Windows Server 2008, the installer requires that the machine have Windows Installer 3.1 or greater on it. (Windows Server 2008 automatically installs a later version of Windows Installer.)

Dragon Medical SDK Client You must install the latest version of the Dragon Medical SDK Client software on workstations where you plan to install *Speech Nodes*.

Supported Virtual Desktop Infrastructure Applications and Terminal Emulators

- XenDesktop 7.1 and XenDesktop 7.6
- Wyse terminals

Supported non-EHR Applications

Once you have installed Dragon, you can use it to control the following applications using your voice:

- WordPad
- NotePad
- Microsoft® Word 2007, 2010 (32 & 64 bit), 2013 (32 & 64 bit), 2016 (32 & 64 bit)
- Microsoft® Outlook® 2007, 2010, 2013, 2016
- Microsoft® Excel® 2007, 2010, 2013, 2016
- WordPerfect® x5, x6
- Apache OpenOffice Writer 3.4
- Open Office Writer v3.1, 3.2

- Internet Explorer 8, 9, 10, 11 (11 supported when Enhanced Protective Mode is disabled)
- Rich Internet Application IE8, IE9, IE10, IE11
- Mozilla® Firefox® 8+
- Rich Internet Application Firefox® 12+
- Rich Internet Application Google Chrome 16+
- Windows Live Mail v15 & v16
- Mozilla® Thunderbird™ x3 and up
- Lotus Notes 8.5

Support for Dragon with Citrix clients and servers

Support for Dragon with vSync and Citrix

In Dragon Medical Network Edition, vSync supports Full Text Control with certain applications published from Citrix. For details, see Chapter 2.

For details about important vSync configuration considerations for customers using the Citrix Smooth Roaming feature, see the following iSupport article: “Solution 15073: Implementing Citrix Smooth Roaming in a DMNE (vSync) Environment”.

The following information lists the different versions of the Citrix XenApp client that you can use with Dragon Medical Network Edition with a local application or using vSync with a Citrix published application.

System requirements for Dragon and Citrix

System requirements for the Citrix XenApp server:

- **Server:** Citrix XenApp Servers 5.0, 6.0, and 6.5, with Windows 2008 R2. XenApp Server 7.6 with Windows 2012 R2 and other supported Windows platforms.
- **Sound card:** Capable of recording, set to 16 bit 11 KHz for audio recording. A sound card is optional if you use a USB microphone or loudspeakers.
- **Speakers:** For playback of recorded speech and text-to-speech features

Applications with Basic Text Control support through vSync

While vSync supports Full Text Control with certain applications published from Citrix, there are some applications where only Basic Text Control support is available from the Dragon client. If you use Dragon with these published applications over a vSync connection, features such as using voice to correct text and move the cursor may not work as expected. The Dragon user may need to use the DictationBox to make corrections and move the cursor.

Use Dragon on a Citrix XenApp server with a WinTerm device

For information on how to run the Dragon Update 2 for Citrix on a WinTerm device, see *Prepare a WinTerm device for use with Dragon on a Citrix XenApp server* on page 51.

Prepare a WinTerm device for use with Dragon on a Citrix XenApp server

Nuance has tested this procedure with the Wyse S90 with native support for Citrix client 9.x.

1. Log into the Wyse thin computing device as an Administrator.
2. To install the **Dragon Update 2 for Citrix**, from the Administrator desktop or a command prompt, disable the Enhanced Write Filter (EWF) to unblock *write* operations on the flash memory.
3. In the Citrix Receiver, enable sound on the client for the application set for *Dragon*. For more information, see *Install the Dragon NaturallySpeaking 12 client update for Citrix* on page 1.
4. From the Wyse thin computing device, map a network drive to the location where you published the *Citrix* audio update as content. You can map the network drive using the Windows Explorer or a command prompt. You can map the network drive using the Windows Explorer or a command prompt. For example:

```
net use * \\server_name\c$ /user:domain_name\user_name * /persistent=no
```
5. In the Citrix Receiver, double-click the **Dragon Update 2 for Citrix** icon to install the update.
6. Follow the instruction from the **Dragon Update 2 for Citrix** install wizard.
7. Log out of the Administrator account if required.

After you install the **Dragon Update 2 for Citrix**, you can start *Dragon*.

After installation, the **Dragon Update 2 for Citrix** uses approximately 118 KB of flash memory on the WinTerm device.

Resolving communication issues between EHR in Citrix and Full Text Control

When the provider connects to the Citrix server, vSync starts automatically in the Citrix session.

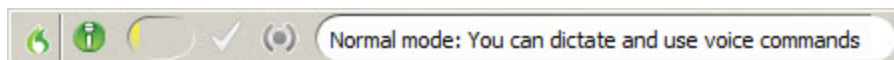
When a provider begins dictating into *Dragon* in a Citrix environment or into a supported Citrix-published EHR, the Full Text Control indicator (see illustration on next page) on the *DragonBar* turns green and remains green as long as the *Dragon Medical Client* is communicating successfully with the vSync module. If the Full Text Control color changes from green to gray, it means one of the following conditions exists:

- The Citrix published EHR is using an unsupported Edit Control.
- vSync did not send back EHR Edit Control information within the allotted time (3000 ms).
- vSync is not running for some reason.

If vSync does not respond within the 3000 ms allotted, the reason might not be network performance, but could instead be one of the following:

- Your Citrix server has too many sessions running. If Citrix servers are overloaded, that will slow down response of vSync's communication with the EHR.
- Your EHR is slow for some other reason.
- Your EHR database might be slow.
- vSync might not respond to a *Dragon Medical Client* request because communication on the server between the EHR and vSync is too slow.
- Another application in your network is producing excess traffic.

If during dictation the *Dragon Medical Client* does not receive response from vSync within the 3000 ms allotted, the client times out; vSync might generate a warning to the client and the Full Text Control on the *DragonBar* might turn from green to gray, indicating that NatText is handling the words just spoken. Under these conditions, dictating with *Dragon* will still place recognized text in your EHR application, but Full Text Control capabilities will not be possible as long as the indicator is gray.



When vSync does not respond, the check mark becomes gray. If the check mark changes between green and gray, this may indicate that a network issue exists.

You can take these actions in a situation where vSync seems to be unresponsive (and the problem is not likely to be a network issue):

1. Turn off vSync for Citrix traffic on the client. Once you turn it off, vSync remains off until the provider exits and restarts/logs in to *Dragon Medical Client* again.
2. Close and reopen the user account.
3. Close the EHR window you are working in and reopen it.
4. Restart the Dragon Medical Client.
5. Restart the EHR.

If you continue to have problems, contact your Nuance representative.

Glossary

Basic Text Control (definition)

Basic Text Control is a type of dictation that Dragon supports for certain applications.

If Dragon does not supply a compatibility module for an application, then a Dragon user can only use Basic Text Control functionality with the application. Certain features such as using voice to correct text and move the cursor may not work as expected. The Dragon user may need to use the DictationBox to make corrections and move the cursor.

Compatibility module support (definition)

Nuance creates compatibility modules for an application to allow Dragon users to dictate into an application and use Full Text Control functionality with the application.

Compatibility module support refers to the existence of a compatibility module for an application.

Dragon Update 2 for Citrix (definition)

The Dragon update for Citrix is an application that you install on each client computer that connects to a Citrix XenApp server that runs Dragon. You must install the update before you run Dragon for the first time on the Citrix XenApp server. You must have administrator rights to install the update.

You can use the vddnspatch2.msi, from the Dragon installation disc, to install the update.

Note: If you intend to install the Dragon Medical client on a Citrix XenApp server, make sure to disable the vSync feature.

Dragon Medical Network Edition (definition)

Dragon Medical Network Edition is the name of the product that includes the Nuance Management Console, the Dragon Medical Client, and other components.

Full Text Control (definition)

Selects text by voice and displays the Correction menu, where you can select from a list of alternative spellings and words, bring up the Spell dialog box, play the selection back, capitalize it, unselect it, or open the Correction Options. Alternatively, you can ignore the Correction menu and dictate something new to overwrite the selection with new text.

Full Text Control indicator (definition)

The colored check mark that appears next to the volume meter on the DragonBar. The indicator changes color to show the level of dictation support in your current application. The indicator is green when all of Dragon's selection and dictation capabilities are supported and gray when the insertion point is in a non-standard window. A dotted-line square indicates you are dictating in Hidden Mode.

MiniTracker (definition)

MiniTracker is another name for the vSync plug-in that an administrator installs on a Citrix XenApp server.

You use the MiniTracker .exe file to install vSync on a Citrix XenApp server:

If you enable vSync logging, vSync creates a log file for every vSync session. You can set vSync to log data for all users which are using vSync on the Citrix XenApp server. The file name of the log file that vSync creates is minitracker.log.

MSI (definition)

An MSI file is a Windows Installer file created by Microsoft Corporation. This kind of file has a .msi file extension. An MSI file typically contains installation control data and is used to install applications.

The NaturallySpeaking and Medical editions of Dragon include an MSI file. You can use the MSI file to install Dragon from a server to client computers across a network.

The Small Practice Edition of Dragon Medical does not support MSI installations.

Non-standard window (definition)

A window that does not support all of Dragon's selection and correction capabilities. When the cursor is positioned in a non-standard window, the DragonBar displays the message "Dictating in a

non-standard window” and its Full Text Control indicator, the colored check mark next to the volume meter on the DragonBar, is gray. You can usually select, correct, and use various commands in non-standard windows, but if you have trouble, use the Dictation Box and transfer text from it into the application.

Nuance Management Console (definition)

The Nuance Management Console allows administrators to perform and manage tasks related to organizations, sites, groups, user accounts, speech services, licenses, and more from a centralized, browser-based administration client.

A hospital administrator can use the Nuance Management Console to manage an entire enterprise system.

Dragon Medical client is the name of the Dragon client that connects with and exchanges data with the Nuance Management Console.

Published Application (definition)

An application that an administrator publishes from a Citrix XenApp server. The documentation sometimes refers to a published application as a Citrix published application.

Standard window (definition)

A window that supports all of Dragon's selection and correction capabilities. When the cursor is positioned in a standard window, the Full Text Control indicator, the colored check mark next to the volume meter on the DragonBar, is green. You can select, correct, and use various commands in standard windows.

A window that does not support all of Dragon's selection and correction capabilities is called a Non-standard window.

User Profile (definition)

A set of files created the first time you use Dragon, which is subsequently used to reflect your vocal characteristics and adapt to your usage. Each person who uses Dragon must have a User Profile, which the software stores in a set of files containing, among other things, acoustic and lexical data. These files contain information about how you sound, the words you use, and how often you use them. When you add a word to your Dragon Vocabulary, correct a mis-recognition, read a training text, or change a setting in the Options dialog, Dragon can save these refinements in your User Profile. If your edition of Dragon supports custom commands, these are also saved in the User Profile.

vSync (definition)

vSync is a plug-in that you install on a Citrix XenApp server to allow a Dragon client user to use Full Text Control functionality with applications published from the Citrix XenApp server.

The vSync plug-in starts when a user starts a Citrix session. The plug-in sends and receives important data from Dragon Medical client, including data about recognized text.

vSync is sometimes referred to as MiniTracker.

vSync for EHRs (definition)

The vSync for EHRs feature allows the Dragon client in Dragon Medical Network Edition to communicate with the vSync plug-in on a Citrix XenApp server.

When Dragon Medical client and the vSync plug-in communicate, a Dragon user can use Full Text Control features with a published application that is located on the Citrix XenApp server that hosts vSync.

vSync Full Text Control Support (definition)

The vSync Full Text Control Support option determines whether the Dragon client in Dragon Medical Network Edition can communicate with vSync on a Citrix XenApp server.

Dragon Medical client must be able to communicate with vSync for a Dragon user to use Full Text Control features with an application published from the Citrix XenApp server.

An administrator sets the value for the vSync Full Text Control Support option through the Nuance Management Console.