

Nuance<sup>®</sup>  
**Dragon  
Medical  
One**



Desktop  
Application

Technical Specifications



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## Software and hardware requirements

Dragon Medical One supports the following hardware and software.

Be aware that not all configurations have been tested. For more information, contact Nuance Healthcare technical support or your Nuance account executive.

### Operating systems

- 32-bit: Microsoft Windows 7 and Windows 8.1. Make sure that the latest service pack is always applied.
- 64-bit: Microsoft Windows 7, Windows 8.1, Windows 10, Windows Server 2008 R2, Windows Server 2012 R2 and Windows Server 2016. Make sure that the latest service pack is always applied.

Microsoft .NET Framework 4.5 (or higher) is required.

In Microsoft Windows 8.1 and 10, you can only use Dragon Medical One in the desktop environment, the Microsoft design language-based user interface (Start screen) is not supported.

If you are working with Microsoft Server 2008 R2, make sure you have the following hotfix applied:

<http://support.microsoft.com/kb/2538047>

### Processor speed

- Minimum: 1.7 Ghz
- Recommended: 2.8 Ghz

### RAM

- Minimum: 512 MB
- Recommended: 2 GB

### Disk space

- Installation package (standalone): less than 50 MB
- Installation package (ClickOnce): less than 100 MB
- After installation: less than 100 MB

### Web browsers

For access to Nuance Management Center (NMC):

- Microsoft Internet Explorer, Microsoft Edge, Google Chrome, Apple Safari

For the ClickOnce installer:

- Microsoft Internet Explorer

For the personalization and help window:

- Microsoft Internet Explorer 11
- In the **Internet Options**, make sure that cookies are enabled.

## Supported EHR systems

Dragon Medical One can be used to dictate at the cursor in most major EHR systems and other Windows applications. Contact Nuance Healthcare technical support or your Nuance account executive if you have questions about using Dragon Medical One with a specific EHR.

## Microphones

Nuance recommends a high-quality, hand-held microphone such as Nuance PowerMic III or the PowerMic Mobile app.

Any microphone that can record audio data in 16 kHz, 16 bit mono format is supported.

## Supported virtualized environments

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### Citrix XenApp/XenDesktop

#### Citrix server

- One of the following operating systems:
  - Microsoft Windows Server 2008 R2
  - Microsoft Windows Server 2012 R2
  - Microsoft Windows Server 2016
- One of the following Citrix virtualization environments:
  - Citrix XenApp 6.5 and 7.x
  - Citrix XenDesktop 7.x (latest version tested: Citrix XenDesktop 7.15)

#### Client PC

- One of the following operating systems:
  - Microsoft Windows 7
  - Microsoft Windows Embedded Standard 7
  - Microsoft Windows 8.1
  - Microsoft Windows 10For information on supported Linux operating systems, see: [Thin clients](#).
- Citrix Receiver 4.3 or higher (latest version tested: Citrix Receiver 4.9)

### Microsoft Remote Desktop Services (RDS)

#### Terminal Server

- One of the following operating systems:
  - Microsoft Windows Server 2008 R2
  - Microsoft Windows Server 2012 R2
  - Microsoft Windows Server 2016

#### Client PC

- One of the following operating systems:
  - Microsoft Windows 7
  - Microsoft Windows Embedded Standard 7
  - Microsoft Windows 8.1
  - Microsoft Windows 10

- Microsoft Remote Desktop Client using Remote Desktop Protocol (RDP) 7.x or higher  
For Nuance RDS Audio Extension and Nuance PowerMic RDS Client Extension the User Datagram Protocol (UDP) transport must be disabled on RDP 8.1 and RDP 10 clients. RDP 8.1 is preinstalled on Windows 8.1 and installed by Microsoft Update on Windows 7 and 8. RDP 10 is preinstalled on Windows 10.

To disable UDP transport, add the following registry value to the Microsoft Remote Desktop Client, then restart the PC:

Key: HKEY\_LOCAL\_MACHINE\Software\Microsoft\Terminal Server Client

DWORD Value: DisableUDPTransport = 1

## VMware Horizon View/RDSH

### VMware Horizon View/RDSH server

- VMware Horizon View/RDSH 6

### Client PC

- One of the following operating systems:
  - Microsoft Windows 7
  - Microsoft Windows Embedded Standard 7
  - Microsoft Windows 8.1
  - Microsoft Windows 10
- VMware Horizon Client 3.5.2 for Windows

## Nuance virtual extensions

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### Audio channels

Nuance provides a custom audio channel to reduce the audio bandwidth requirements between the client end point and the virtual server. This custom audio channel requires 28 kbit/s for each user while they are dictating (native audio channels often require up to 1.4 Mbit/s).

To use the custom audio channel, deploy it on the server/virtual desktop hosting the application and on the client PC.

### Thin clients

To use the custom audio channel in a thin client environment, the end point must be installed on the client terminal. This table lists the supported thin clients.

Virtualization infrastructure	Model/manufacturer	Operating system/firmware requirements
Citrix	Various	Microsoft Windows Embedded Standard 7
Citrix	IGEL UD2 LX	LX 5.08.100
Citrix	IGEL UD3 LX	LX 5.08.100
Citrix	IGEL UD5 LX	LX 5.08.100
Citrix	Fujitsu Futro S450	eLux RP 4.9.0
Citrix	Fujitsu Futro S520/S700/S720	eLux RP 5.1.x (Philips SpeechMike button controls have not been tested - Philips Speech Drivers for Citrix are not included in this firmware version.)
Citrix	HP t610	eLux RP 4.4.0

## Backward compatibility

The Nuance virtual extensions are designed to be backward compatible from the virtual server to the client end point. This means that you can run newer versions of the Nuance virtual extension on your virtual server and they will work with older versions of the corresponding client end point extension with the following restrictions:

- New server virtual extensions are backward compatible with the corresponding end point virtual extensions for up to one year.
- When upgrading Dragon Medical One, you must also upgrade the virtual server to the latest version of the virtual extension.
- It is recommended to upgrade your end points to the latest versions of the server virtual extension.

## Microphone controls

To enable button controls for the Nuance PowerMic in a Citrix, Microsoft RDS or VMware Horizon environment, install the corresponding PowerMic control channel.

For RDS and VMware button channels, the extension does not need to be installed on the server/virtual desktop; the required server binaries are already included in the application folder.

Redistributable packages for Philips, Grundig and Olympus devices are also available.

For more information, see the documentation delivered with the Nuance virtual extensions.

## Server runtime requirements

### Memory

The Dragon application's memory usage, when in use, will fluctuate (increase and decrease based on user behavior and Microsoft Windows memory management behavior). For sizing and planning purposes we estimate memory utilization of 220 MB (full working set), of which approximately 70 MB (shared working set) are shared between all instances of the SoD.exe process on the same machine - the real physical memory impact therefore is approximately 150 MB per instance.

## CPU

With modern multi-core CPU architecture and provided that a given virtual session has been assigned at least one core, Dragon Medical One consumes between 1% and 3% of the available CPU per user session while the user is dictating.

## Network requirements

### URLs and TCP ports

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- Application download: Web browser access to [dragonmedicalone.nuance.com](http://dragonmedicalone.nuance.com) via port 80.
- Dragon Medical One requires access to Nuance Management Server (NMS) at [nms.nuancehdp.com](http://nms.nuancehdp.com) via port 443 and Dragon Medical Server at [nsa.nuancehdp.com](http://nsa.nuancehdp.com) via port 443.
- Optional: PowerMic Mobile requires access to NMS ([nms.nuancehdp.com](http://nms.nuancehdp.com)) and the PowerMic Mobile Hub (<https://pmm.nuancehdp.com>) via port 443.
- For Dragon Medical Analytics: Web browser access to <https://sas1.nuancehdp.com/SpeechAnalytics> and <https://sas2.nuancehdp.com/SpeechAnalytics> via port 443.

### Bandwidth

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Dragon Medical One installed on a Windows PC:

- 80 kbps between Dragon Medical One and the Nuance data center.

Dragon Medical One installed on a virtual desktop or as a published application:

- With the Nuance virtual extension installed: 28 kbps between the client PC and the server/virtual desktop where Dragon Medical One is installed.
- Using the native audio channel: Up to 1.4 Mbps between the client PC and the server/virtual desktop where Dragon Medical One is installed.
- 80 kbps between Dragon Medical One and the Nuance data center.

PowerMic Mobile:

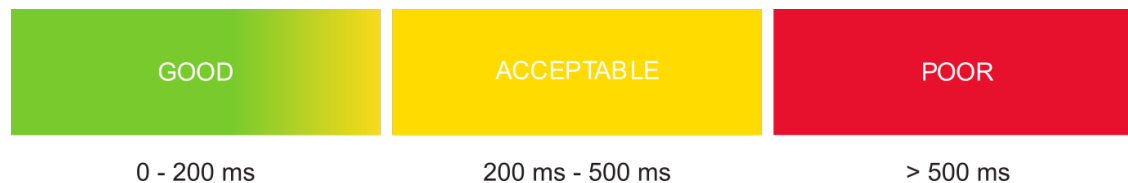
- Approximately 12 kbps between the mobile device and the Nuance data center via WiFi or 3G/4G/LTE.

### Latency

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#### Local installation

High level guidelines for network latency between Dragon Medical One and the Nuance-hosted data center:



#### Virtualized environments

If Dragon Medical One is installed on a virtual server, network latency between the client PC and the virtual server must not exceed 50 ms.



## Deployment

Dragon Medical One should be installed with the target application and run in the same Windows session.

There are two distribution methods:

- ClickOnce: Your end users can download and install the software directly onto their local PCs. This does not require administrative rights because it installs the software to the user's Windows profile, and can significantly simplify application deployment.
- Standalone: Use this method in virtualized environments.

Your organization can use either method or both, depending on your environment and usage policies.

## User authentication

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There are four options for user authentication when Dragon Medical One is started:

- No authentication: The user enters a unique user name to log on and must always use this name.
- Native authentication: The user must enter a user name and password provided by the administrator when logging on, or the user can run a command line that passes the user name (and password if required). The credentials are checked via the Nuance Management Server (NMS).
- LDAP authentication: The user must enter a user name and password to log on. The credentials are checked via an LDAP server. To authenticate against an LDAP server, you must install an NMS Local Authenticator in your organization domain to connect Dragon Medical One to NMS.
- Trusted authentication: The user, logged on to Microsoft Windows with the Active Directory user name and password, is automatically logged on to the application. The credentials are checked via the Nuance Management Server (NMS).

## Data security and business continuity

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Data security is extremely important to Nuance and we are dedicated to meeting the high data security and continuity demands of our healthcare clients.

Nuance has partnered with Microsoft Azure as our cloud computing service for Dragon Medical One. Microsoft Azure meets a broad set of international, industry-specific compliance standards. All communication between client applications and Nuance speech services is via HTTPS, using TLS 1.2 with the 256-bit AES cipher algorithm.

Our hosted services security practices, combined with our high-availability, high-redundancy infrastructure, ensure that your users enjoy fast and secure clinical speech recognition.

For more information on security and business continuity, see the *Nuance Healthcare Hosted Infrastructure White Paper*, available from your Nuance account executive.