

Practice Partner

System Requirements



December 2016

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06/02/2014	11	Added information that the Oracle client and server versions must match and must both be 11.2.0.4.
04/16/2015	9	Removed bullet point for Safari on iPad. WebView is not supported on tablets.
02/29/2016	10	Added Microsoft SQL Server 2012 as a supported database software platform.
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05/09/2016	6	Fixed a typo in the Known limitations section.
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06/09/2016	6, 9	Added new supported versions of Windows (10) and Zetafax (version 17).
11/16/2016	18	Updated the best practices information for anti-virus solutions.
12/06/2016	21	Added a new UNCPATH.FL section.

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Chapter 1 - System Requirements

This document provides the system requirements for Practice Partner release 11.0.

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Recommended Configurations

The table below provides the e-MDs Practice Partner infrastructure recommendations. These recommendations are based on a mix of industry standard technologies and proven experience of our customers. These recommendations also are based on the minimum requirements listed in this document. Adding additional resources to some equipment may change the recommended configuration.

These recommendations are for production environments only. Additional infrastructure requirements may be necessary for reporting, failover, testing, or training environments.

Recommendations are based on a maximum of five concurrent Practice Partner sessions per provider. For customers with multiple databases, the number of providers is calculated per database instance.

These requirements are specific to Practice Partner 11.0. Although e-MDs tries to anticipate future hardware and software needs and compatibilities, recommended/required configurations may change with future versions.

Number of Providers	Database	Requirements
1-10	c-tree Server	Application server.
		 Thin client server technology, for users connecting remotely (from home, over a WAN, through a VPN, and so on) or through wireless devices.
		 A separate thin client server, if the total number of thin client users exceeds 10.
		 For fewer than 10 thin client users, the application server can be used as a thin client server.
10-15	c-tree Server,	Application server.
	Microsoft SQL	A database server, for Microsoft SQL.
		 Thin client server technology, for users connecting remotely (from home over a WAN, through a VPN, and so on) or through wireless devices.
		 A separate thin client server, if the total number of thin client users exceeds 10.
		 For fewer than 10 thin client users, the application server can be used as a thin client server.

Number of Providers	Database	Requirements
15-20	Microsoft SQL, Oracle	Application server.
		Database server.
		 Thin client server technology, for users connecting remotely (from home, over a WAN, through a VPN, and so on) or through wireless devices.
		 A separate thin client server, if the total number of thin client users exceeds 10.
		 For fewer than 10 thin client users, the application server can be used as a thin client server.
20+	Oracle	Application server.
		Database server.
		 Thin client server technology, for users connecting remotely (from home, over a WAN, through a VPN, and so on) or through wireless devices.
		 A separate thin client server, if the total number of thin client users exceeds 10.
		 For fewer than 10 thin client users, the application server can be used as a thin client server.

Optional Servers

The following table describes optional servers.

Server	Description
Interface workstation/server	Customers often have interfaces to external systems, such as laboratories. Depending on the configuration of the customer and the number of interfaces that will be run, an interface workstation or server may be necessary.
Fax server	For smaller customers, the fax board may be installed on one of the existing servers in the environment, typically the application server. For larger customers doing a significant volume of faxing, a separate fax server may be required. This server cannot be virtualized.
WebView server	If you are using the WebView product, you also must have a separate server to run the web services. This must be its own server and cannot contain patient data as the server must be configured to reside in the network's DMZ or have an encrypted tunnel to the Internet to facilitate web traffic. This server can be virtualized.

Operating Systems

The following table lists the operating systems that are supported and not supported.

Supported	Not Supported
32- and 64-bit server operating systems, unless otherwise specified.	Small Business Server products
e-MDs strongly recommends 64-bit operating systems for database servers and thin client servers.	
	Home operating systems
	Windows 8 Basic and RT
	Windows 2003
	Windows 2003 R2
	Windows XP

The following table lists the recommended and supported operating systems for use with Practice Partner 11.0.

Server/Workstation	Recommended Operating Systems	Supported Operating Systems
Application Server	 Windows Server 2008 R2 Standard Required in order to use BitLocker drive encryption RemoteApp feature is not supported Windows Server 2012 Standard (see Known Limitations section on page 6) 	 Windows Server 2008 Required in order to use BitLocker drive encryption RemoteApp feature is not supported Windows Server 2008 R2 (Datacenter, Enterprise, and Foundation) Windows Server 2012 (Datacenter, Essentials, and Foundation) For information on limitations for Windows Server Essentials and Foundation, e-MDs recommends that you refer to your Windows Server documentation.
Database Server	• Windows Server 2008 R2 e-MDs recommends running a 64-bit operating system for database servers with 64-bit database server software.	 Windows Server 2008 Windows Server 2012 UNIX (Oracle database only)

Server/Workstation	Recommended Operating Systems	Supported Operating Systems
Thin Client Server	Windows Server 2008 R2	Windows Server 2008
	 RemoteApp feature is not supported 	 RemoteApp feature is not supported
	Citrix MetaFrame 6.0	Windows Server 2012
		Citrix MetaFrame 4.5
WebView Server	Windows Server 2008 R2	Windows Server 2008
		Windows Server 2012
WebView Workstation	Windows Server 2008 R2	Windows Server 2012
Interface Workstation	• Windows 7 Professional,	Windows Vista Business
	Ultimate, or Enterprise	 Windows 8 Professional or Enterprise
Interface Server	Windows Server 2008 R2	Windows Server 2008
		Windows Server 2012
Fax Server	Windows Server 2008 R2	Windows Server 2008
		Windows Server 2012

Server/Workstation	Recommended Operating Systems	Supported Operating Systems
Standard Workstation/Laptop/ Tablet	Windows 7 Professional, Ultimate, or Enterprise	Windows 10 Professional or Enterprise
		Windows Vista Business
		 Windows 8 Professional or Enterprise
		Requirements for using Windows 8:
		- You must be using the current release of Practice Partner 11.0.
		 The Practice Partner client requires a mapped drive to access the PPart folder (for example, if the install is on P:\PPart, all workstations must have a mapped P: drive to the server p:\) during installation and execution thereafter. If the mapped drive does not display during the installation, consult Windows documentation for information on how to set up a mapped drive.
Thin Client Workstation/ Laptop/Tablet	Because thin client workstations, laptops, and tablets do not run any Practice Partner software, any operating system capable of running the appropriate thin client software is acceptable.	
	Some thin client devices come device storage. Practice Partne this configuration. Thin client de Partner must do so through a th	r has not been tested to run in evices that access Practice

Known limitations

If you are using Windows 8, you will be unable to click the messaging folders in Practice Partner (for example, **Archived**, **Deleted**, **Inbox**, and so on). To prevent this issue, upgrade to Windows 8.1.

Application server version and Oracle: If you plan to install Oracle, there is a limitation for the installation of the application on a Windows Server 2012. The BulkDataLoad process does not populate the corresponding database tables. A debug window appears at the end of installation. This occurs for any version of Oracle since the limitation is caused by Windows Server 2012.

You have two options to work around this limitation:

- 1. Install the application on a 2008 Server.
- 2. Upgrade to a 2012 application server after the installation of the Practice Partner application on a 2008 Server.

NOTE: The Database Server can be 2012 for Oracle.

Third-Party Software Compatibility

e-MDs sells several third-party software solutions that integrate with the Practice Partner software. Customers already may own this software or can purchase it through other vendors. To ensure proper operation, the following sections list the system requirements and specific software versions that are compatible with Practice Partner 11.0.

Crystal Reports

Practice Partner 11.0 supports Crystal Reports version 13.0.

Dragon NaturallySpeaking

Practice Partner 11.0 supports Dragon NaturallySpeaking versions 9.5, 10.0, and 10.1. Version 10.1 is required for Windows 7.

The following table describes e-MDs' system recommendations for Dragon NaturallySpeaking. Refer to Dragon NaturallySpeaking documentation for complete system requirements.

Recommendation	Description	
Operating System	Windows 7 Professional (64-bit)	
	For Macbooks, you must use Windows 7 via Parallels Desktop v8.	
Memory	4GB RAM	
	6GB RAM for Intel Dual Core+ processors	
	For Macbooks, at least 4GB RAM allocated to the Windows desktop alone.	
Disk Space	10-35MB for a set of user files, depending on the speech model and vocabulary you select.	
Microphone	ScanSoft-approved USB noise-canceling headset microphone with Dragon NaturallySpeaking installed locally on your workstation.	
	Specific headsets:	
	Nuance PowerMic II	
	Philips SpeechMic III	
	Plantronics Calisto Bluetooth	
	Sennheiser headset	
	For Macbooks, you must use a Nuance PowerMic II shared to Parallels Desktop v8.	
Remote Desktop	Do not use Remote Desktop with Dragon NaturallySpeaking.	
Citrix	Do not use Citrix with Dragon NaturallySpeaking.	

ExitCare

Patient Records can be integrated with ExitCare version 6.3.0.6 or later.

Before you install ExitCare, ensure that your system meets the minimum requirements listed in the ExitCare documentation.

Midmark ECG

Practice Partner 11.0 supports Midmark ECG version 8.1. ECG devices now are supported on 64bit operating systems.

Midmark Spirometer

Practice Partner 11.0 supports Midmark Spirometer version 8.1. Spirometry devices now are supported on 64-bit operating systems.

Patient Education

The following table lists the minimum workstation requirements for Patient Education.

Component	Requirement
operating system	One of the following:
	Windows 7
	Windows 2008
	Windows Vista Business edition
web browser	Microsoft Internet Explorer 8 or later

WebView

The following table describes the browser requirements for Practice Partner WebView.

Requirement	Description
Browser requirements	Microsoft Internet Explorer 8, 9, or 10
	Firefox 3.5 and higher
	Google Chrome
	WebView is not supported on tablets.

ZetaFax

Practice Partner 11.0 supports ZetaFax versions 17 and 2014.

Database Software Compatibility

The following table describes the database software platform requirements for e-MDs Practice Partner 11.0.

Requirement	Description
Database software platform	Recommended platforms:
	FairCom c-tree Server v7.12
	Microsoft SQL 2008 R2
	Oracle 11g R2
	Supported platforms:
	Microsoft SQL 2012
	Microsoft SQL 2008
	Microsoft SQL Server 2012
	Oracle 11g
	- Oracle 11.1.0.7 is required for Windows Server 2008

Express Editions of the database software are not supported. Additionally, unregistered or unlicensed copies of the database software are not supported.

Hardware Requirements

The hardware requirements allow customers flexibility in their deployment of Practice Partner. For specific formulas in determining how much hard drive space you need, see the Disk Storage Requirements section.

The requirements listed are for production environments only. Increased or additional resources may be necessary for additional environments, such as training or testing.

The requirements are for the Practice Partner software only. If you decide to run additional services (for example, DNS or Active Directory on your application server or Microsoft Office on your thin client server), you will need to add additional CPUs and/or RAM.

Application Server

The following table lists the hardware requirements for application servers.

Component	Minimum Requirement
CPU (Processor)	Intel Dual Core Xeon 2.0GHz
RAM (Memory)	4GB
Storage Array Type	RAID-5 or SAN
Optical Drive	DVD-ROM
Network Card (NIC)	1Gbps

For smaller customers, these specifications will support up to 10 thin client users and the Practice Partner application folder.

Database Server (SQL or Oracle)

The following table lists the hardware requirements for SQL and Oracle database servers.

Component	Minimum Requirement
CPU (Processor)	Dual Intel Quad Core Xeon 2.0GHz
RAM (Memory)	8GB (16GB for 300-1000 users; 32GB for 1000+ users)
Storage Array Type	RAID-1 and RAID-10 or SAN
Optical Drive	DVD-ROM
Network Card (NIC)	1Gbps

Oracle and SQL servers require multiple RAID arrays. One array is for the database files; the other is for either transaction logs (SQL) or archive logs/redo logs (Oracle). e-MDs recommends a third array for the operating system.

For Oracle, the client and server versions both must be 11.2.0.4.

These specifications are for a single production database. Additional databases (testing, training, production) require, at a minimum, an increase in RAM. Contact e-MDs Support for further information.

Sample database server (fewer than 300 users)

- 2 x Quad Core Intel Xeon 2.5GHz
- 8GB RAM
- 2 x 73GB SAS RAID-1 (Operating System and Logs)
- 2 x 146GB SAS RAID-1 (Logs and Pagefile)
- 4 x 300GB SAS RAID-10 (Database Files)

Thin Client Server

The following table lists the hardware requirements for thin client servers.

Component	Minimum Requirement
CPU (Processor)	Intel Dual Core Xeon 2.5GHz
RAM (Memory)	4GB
Optical Drive	DVD-ROM
Network Card (NIC)	1Gbps

Thin client servers are designed to support 25 sessions of Practice Partner only. For each additional 25 sessions of Practice Partner, add 4GB of RAM and two more CPU cores.

WebView Server

The following table lists the hardware requirements for WebView servers.

Component	Minimum Requirement
CPU (Processor)	Intel Dual Core 2.0GHz
RAM (Memory)	2GB
Optical Drive	DVD-ROM
Network Card (NIC)	1Gbps

Thin Client Workstation/Laptop/Tablet

The following table lists the hardware requirements for thin client workstations, laptops, and tablets.

Component	Minimum Requirement
CPU (Processor)	Intel Dual Core 1.6GHz (1.0GHz for tablets)
RAM (Memory)	2GB
Network Card (NIC)	100Mbps (or 802.11g for wireless)
Video Resolution	1024x768 (1200x800 for widescreen displays)

Interface Workstation

The following table lists the hardware requirements for interface workstations.

Component	Minimum Requirement
CPU (Processor)	Intel Core 2 Duo 2.0GHz
RAM (Memory)	4GB for Windows Vista, Windows 7, and Windows 8
Optical Drive	DVD-ROM
Network Card (NIC)	1Gbps

Interface Server

The following table lists the hardware requirements for interface servers.

Component	Minimum Requirement
CPU (Processor)	Intel Dual Core Xeon 2.0GHz
RAM (Memory)	2GB
Optical Drive	DVD-ROM
Network Card (NIC)	1Gbps

Interface servers are necessary when running more than 10 total interfaces. Additional CPUs or RAM are necessary for more interfaces to be run.

For this many interfaces	Use an interface
up to 9	workstation.
10+	server.

Standard Workstation/Laptop (Fat Client Configuration)

The following table lists the hardware requirements for standard workstations and laptops using a fat client configuration.

Component	Minimum Requirement
CPU (Processor)	Intel Core 2 Duo 1.6GHz
RAM (Memory)	4GB for Windows Vista, Windows 7, and Windows 8
Network Card (NIC)	100 Mbps
Video Resolution	1024x768 (1200x800 for widescreen displays)

Disk Storage Requirements

The following table lists the disk storage requirements.

Disk Component	Recommended Storage
Base Practice Partner installation	10GB
	For large multi-provider/specialty single- database installations, more and more data becomes shared between providers so the total amount of space is not linear.
Practice Partner upgrades	The application server's drive should have enough storage space to contain the PPart folder. The upgrade can increase the PPart folder's size to one and a half times its original size.
	Microsoft SQL and Oracle sites only:
	• The application server's drive should have enough storage space for the PP_Small file group or table space. The upgrade can increase the size to two times its original size.
ePrescribing (formulary files)	150GB
	ePrescribing formulary files can be relocated to a less expensive drive configuration. Contact your implementation consultant or Practice Partner Support for information regarding this configuration option.
Black-and-white imaging	2GB per provider per year
	1GB per provider per year for 50+ providers in a single database
	No single formula can account for every circumstance. If you will be doing a large amount of scanning (for example, full patient charts for every patient in your clinic), discuss your storage needs with Practice Partner Support.
Color imaging	5GB per provider per year

Disk Component	Recommended Storage
Database growth	2GB per provider per year
	1 GB per provider per year for 50+ providers in a single database
	Oracle and SQL database types need additional storage for transaction logs, archive logs, and/or mutliplexed redo logs. This section only covers storage needed for Practice Partner application data.
SAN technology	Make sure that the LUNs are on disk groups that are of the same recommended RAID level as direct attached storage.

Storage Examples

The following examples represent how much storage to allocate when you build your Practice Partner infrastructure. If you have any questions or concerns, contact the e-MDs support team to discuss your specific needs.

Example 1

Situation	Storage Solution
3-year server life expectancy	10GB of space for base Practice
50 providers	Partner installation on an application server
SQL database type	 150GB of space for the ePrescribing
ePrescribing	formulary files on an application
Black-and-white imaging	server
	 150GB of space for SQL database files on a SQL server
	 150GB of space for scanned images on an application server or a separate storage device

Example 2

Situation	Storage Solution
3-year server life expectancy	10GB of space for base Practice
3 providers	Partner installation on an application server
c-tree Server database type	 150GB of space for the ePrescribing
ePrescribing	formulary files on an application
Black-and-white imaging	server
	 18GB of space for c-tree Server database files on an application server
	 18GB of space for scanned images on an application server or a separate storage device

Peripherals

Peripheral	Comments	Recommended Models
Printer	e-MDs recommends TCP/IP-enabled, PCL5- compatible printers.	HP P2035N (for light-duty work, such as
	For customers using thin client technology, e- MDs recommends the Uniprint software. For more information, go to http://www.uniprint.net.	prescriptions)
		 HP P4515N (for medium- to heavy-duty work, such as charts and reporting)
Scanner	e-MDs requires TWAIN-compatible scanners.	• HP ScanJet 5000/7000
	Any scanner that you purchase must include the necessary TWAIN driver software for use with the scanner. Direct scanning from the Zoom application requires a scanner attached directly to a PC.	• Fujitsu 6130
	For customers using thin client technology, e- MDs recommends the Remote Scan software. For more information, see http://www.remote- scan.com.	
Fax Board	For small clinics, you can install the fax board	Brooktrout TruFax Series
on the application server or thin client server. For customers that do a larger amount of faxing, e-MDs recommends a dedicated fax server.	Brooktrout TR1034 Series	

The following table lists the recommended printers, scanners, and fax boards.

Practice Partner Best Practices

e-MDs provides both requirements and recommendations for Practice Partner best practices.

Required best practices

The following table lists the required best practices for using Practice Partner.

Торіс	Comments
Practice Partner Application Folder	The Practice Partner application folder must be on its own logical partition.
	The logical drive on your application server must be a drive letter that is not reserved by any workstation (P: is the recommended drive letter).
	The drive letter where the application folder resides on the application server must be available to be mapped on every Practice Partner computer.
Backups	Backups are required. e-MDs recommends a tape rotation with periodic offsite backups.
	e-MDs Practice Partner does not install, support, or maintain backup solutions. This is the responsibility of the customer.
	e-MDs Practice Partner cannot be held responsible for data loss incurred due to incomplete or corrupt backups.
Anti-virus Solutions	An anti-virus solution must be installed with the e-MDs-recommended configurations.
	The application folder and client folder must be excluded from real-time/on-access scanning. e-MDs recommends scheduled scans when users are not in the system.
	Trend Micro and CA eTrust are unapproved anti-virus solutions that may cause instability in the Practice Partner application.
Oracle or SQL Database Platforms	Customers using the Oracle or SQL database platforms must have qualified DBA services. This can be a full-time employee of the organization or a contractor. e-MDs does offer a variety of DBA service solutions as additional service contract fees.
Teamed Network Interface Cards	The use of teamed network interface cards (NICs) is not supported.
Domain/Active Directory Infrastructure	Practice Partner requires a domain/Active Directory infrastructure.

Торіс	Comments
New Technology File System (NTFS)	NTFS is required due to the necessity to set file permissions.
Microsoft Security	The following Microsoft security features and software must be disabled.
	User Account Control (UAC)
	Data Execution Prevention (DEP)
	Windows Firewall

Recommended best practices

The following table lists the recommended best practices for using Practice Partner.

Торіс	Comments
Windows Pagefile	The Windows pagefile should be on its own disk controller and should be two times the amount of RAM in the machine.
Domain Name Servers (DNS)	DNS should be on the same subnet as the Practice Partner servers.
Hardware	e-MDs highly recommends hardware from experienced and trusted vendors such as HP, Dell, and IBM. e-MDs strongly discourages White-box servers.
Operating System Partition	Provision enough space on your operating system partition for growth. e-MDs recommends 32GB+ for your operating system partition.
Firewalls	Customers should have a hardware-level firewall protecting their network.

Special Considerations

Clustering

Practice Partner does not support clustering. The application server cannot be clustered.

Oracle or SQL servers may be able to be clustered. This is an untested platform and it is the responsibility of the IT personnel to implement, maintain, and, if necessary, remove from the environment if it is found to be problematic.

Encryption

Practice Partner can use third-party encryption tools to secure patient date. e-MDs' tested encryption solution for Practice Partner is Microsoft's BitLocker tool included as part of Windows 2008 and higher. If you would like to use this solution, documentation is provided on BPS Customer Central and BPS VAR Central. Other tools may work but it is the responsibility of the customer's IT personnel to implement these solutions. These other third-party solutions are not tested by e-MDs.

Virtual Machines

e-MDs supports the use of virtual servers to run the Practice Partner application. Virtual servers must be implemented only by IT staff familiar in their implementation, configuration, and administration. Hardware resources allocated to virtual servers must be equal to the resources required for physical hardware. e-MDs does not recommend virtualizing database servers running Oracle or Microsoft SQL. e-MDs recommends VMWare vSphere 4.0 (or higher) or Microsoft Hyper-V for hypervisors.

e-MDs currently is evaluating workstation virtualization (such as VMWare View) and is not currently supported with Practice Partner.

Thin Client Server Limitations

Use of a thin client server has certain limitations. If you have any questions about these limitations, contact Practice Partner Support.

Midmark ECG

Midmark ECG is supported in a standalone environment, meaning that you create and save results using Midmark's software. You then can export the results from Midmark and import them into Practice Partner's database. By assigning the patient IDs in the Midmark software, Practice Partner will automatically import the report into the appropriate patient chart. In order for this configuration to function, a workstation must have a serial port; some tablet PCs do not have a serial port and therefore would not work. If the computer doesn't have a serial port, you can purchase a Midmark Serial to USB adaptor.

Midmark Spirometer

Midmark Spirometer is supported and can be used in real time. To use Midmark Spirometer in real time, you must have the serial version of Midmark Spirometer and the workstations must have serial ports; some tablet PCs do not have a serial port and therefore would not work. If the computer doesn't have a serial port, you can purchase a Midmark Serial to USB adaptor.

Dragon NaturallySpeaking

You can use the Dragon NaturallySpeaking speech recognition product in a thin client environment. You must install Dragon locally. Using the 'show dictation box' feature in Dragon, you can dictate directly into Practice Partner running on the thin client server. Certain integration features are not compatible and do not function, but this method does allow for speech recognition capabilities within Patient Records.

For workstations using Dragon NaturallySpeaking with Practice Partner, e-MDs recommends 4GB of RAM.

UNCPATH.FL

This file contains the share information necessary for the Practice Partner services to run. Valid entries either are **LOCAL** or the UNC path to the PPART share, such as **\\servername\share**. This UNC path will be the same as fat client workstations map. UNCPATH.FL should not have the actual PPART folder within it.

Permissions for this share must be set so that the local SYSTEM user has full control to the share.

For the services to behave properly, DNS/Active Directory must be functioning correctly so that permissions and hostname resolution work.

The following list offers a list of items to check when troubleshooting services:

- Permissions to the share (SYSTEM)
- DNS resolution of hostname
- LOCAL vs. UNC pathing

Glossary

This section defines terms used in the System Requirements book.

Application Folder

Every Practice Partner installation has an application folder. This folder contains (but is not limited to):

- configuration files
- client software installation files
- interface files
- temporary files
- image files (unless specifically configured otherwise)

Application Server

All customers will have an application server. This server is where the Practice Partner application folder resides. Practice Partner network services also are installed on this server. For customers using the c-tree Server database type, this is where your database files will reside.

Database Server

Customers running Oracle or SQL for their database type also will have a database server. This server runs the RDBMS software and is where the majority of the patient data will be stored. This is in addition to an application server, as the application server still will be required to house the application folder.

Standard Workstation

A standard workstation also may be referred to as a fat client or thick client. The Practice Partner software is installed on the computer itself. Standard workstations must be on a LAN to the application server (and database server, if applicable).

Thin Client Server

A thin client server is a shared resource that runs applications, as opposed to having the software installed locally on PCs. It provides advantages in ease of management and potentially cost savings in software licenses and client hardware. For large organizations, there may be several thin client servers in the network. Thin client servers can use Terminal Services by itself or also run the Citrix software. Use of Terminal Servers and/or Citrix is referred to as thin client server technology. Thin client servers are required when users are connecting from remote locations (through a WAN or broadband) or through a wireless connection. Thin client servers also can be used on a LAN to simplify administration. Make note of the thin client server limitations in this document.

Thin Client Workstation

A think client workstation refers to a device whose purpose is to connect to a thin client server. This can be a workstation, tablet, or a purpose-built thin client device such as a Wyse Terminal. The Practice Partner application software is installed on a thin client server. Information that passes across the network from the end user is keystrokes, mouse movements, and screen images.

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