McKESSON
Empowering Healthcare

PRACTICE PARTNER®

A better way to practice™

System Requirements

2401 Fourth Avenue, Suite 700
Seattle, WA 98121
206.441.2400
www.practicepartner.com

August 14, 2008
Copyright © 2008 McKesson Information Solutions LLC. All rights reserved.
Practice Partner® is a registered trademark of McKesson Information Solutions LLC. All rights reserved.
This publication, or any part thereof, may not be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, storage in an information retrieval system, or otherwise, without the prior written permission of McKesson Information Solutions LLC.
The information in this guide has been carefully checked and is believed to be accurate. McKesson assumes no responsibility for any inaccuracies, errors, or omissions in this guide.
McKesson reserves the right to revise this publication and to change its content without obligation to notify any person of the revision or changes.
Microsoft and Windows are registered trademarks of Microsoft Corporation. Other brands and their products may be registered or unregistered trademarks of their respective owners.

Table of Contents

General Requirements 1

Server Requirements 2

Operating System 2

Small Practices, Single Server 2
Small Practice (1 to 25 concurrent users, 0-5 Terminal Services users) 2
Small Practice (1 to 25 concurrent users, 5-25 Terminal Services users) 2

Small to Medium Practices, Multiple Servers (25-75 users: c-tree Server) 3
Application Server 3
Thin Client Server (Terminal Services or Citrix) 3

Medium to Large Practices, (75-125 users: c-tree Server or SQL) 4

Large Practices (125+ users: Oracle) 5

Hard Drive Storage Space 6

Backup Hardware and Software 6

Workstation, Laptop and Tablet PC Requirements 7

Operating System 7
Supported Workstation Operating Systems 7

Standard Client or Laptop 7

Thin Clients 7

Peripherals 8

Printers 8
Reports, Charts and General Use Printers 8
Prescription Printers 8

Fax Servers 8

Scanners 8

Networks and Infrastructure 8

Interface Workstations and Servers 9

Internet based Support 9

General Requirements

Practice Partner has developed the following system requirements from the best practices of numerous customer sites. These requirements reflect the **minimum** requirements of the Practice Partner application. Customers should not assume any operating system, network or hardware configuration is supported unless it is listed in this document. These requirements are designed to serve the needs of both large enterprise customers as well as smaller physician groups in private practice. When purchasing hardware for your Practice Partner system, consider the following:

- ☐ Database server must have separate operating system and data partitions. Preferably a P:\ partition for the data. Data partition must be a non-conflicted network drive.
- ☐ Use only name-brand hardware from vendors such as Dell, Hewlett-Packard/Compaq, IBM, and Gateway. **Home-built or "white box" computer systems are not supported.**
- ☐ Practice Partner recommends specific third-party hardware and software solutions, but does not resell or support them unless specifically stated. For questions about specific requirements, costs and use of third-party applications, please contact the manufacturer or an authorized reseller.
- ☐ Plan ahead for future upgrades. As computer software evolves and introduces new features, the system requirements will increase to accommodate those new features.
- ☐ Have a disaster recovery plan in place. Periodically you will want to make sure that in the event of a disaster; you can recover your data and be functional in the shortest amount of time possible. **Backup is not optional; it is absolutely required.**
- ☐ Have your computer systems installed by information technology professionals. Computer software is only as good as the hardware and operating system configurations that it runs on, so you want to make sure that your computers and network are setup properly.
- ☐ Practice Partner does not support 64 bit operating systems except when used for a SQL database server.
- ☐ A domain infrastructure is required for use with Practice Partner. A domain provides a robust security model with which to secure your entire network, as well as affords the ability to alter file and directory permissions at a more granular level.

Server Requirements

Practice Partner has developed the following requirements for your server(s). Please be sure to adhere to only Practice Partner-supported operating systems and specifications.

Operating System

Practice Partner has been tested and approved to operate on Microsoft Windows Server 2003 Standard or Enterprise. Any other operating system is untested and considered unsupported (please see the exception under Oracle Database Servers).

Small Practices, Single Server

Sites with 1-25 users typically will use the c-tree Server database type.

Small Practice (1 to 25 concurrent users, 0-5 Terminal Services users)

	Practice Partner Recommendation
Single Processor	Dual core 2.0GHz+ or Quad core 1.8GHz+
RAM	2 GB
System Drive	32 GB or higher
Data Drive	RAID-5, see “Hard Drive Storage Space” section
Network Card	1 Gbps
Optical Drive (DVD)	Required
Tape Backup	VXA, DLT or LTO (large enough to backup entire PRACTICE PARTNER folder)
Video	1024x768
UPS (Battery)	1500VA or higher

Small Practice (1 to 25 concurrent users, 5-25 Terminal Services users)

	Practice Partner Recommendation
Dual Processor	Dual core 2.0GHz+ or Quad core 1.8GHz+
RAM	4 GB
System Drive	32 GB or higher
Data Drive	RAID-5, see “Hard Drive Storage Space” section
Network Card	1 Gbps
Optical Drive (DVD)	Required
Tape Backup	VXA, DLT or LTO (large enough to backup entire PRACTICE PARTNER folder)
Video	1024x768
UPS (Battery)	1500VA or higher

Small to Medium Practices, Multiple Servers (25-75 users: c-tree Server)

Sites with 25-75 users typically will use the c-tree Server database type.

Application Server

	Practice Partner Recommendation
Single Processor	Dual core 2.0GHz+ or Quad core 1.8GHz+
RAM	2 GB
System Drive	32 GB or higher
Data Drive	RAID-5, see “Hard Drive Storage Space” section
Network Card	1 Gbps
Optical Drive (DVD)	Required
Tape Backup	VXA, DLT or LTO (large enough to backup entire PRACTICE PARTNER folder)
Video	1024x768
UPS (Battery)	1500VA or higher

Thin Client Server (Terminal Services or Citrix)

Configuration will support 40 to 50 users.

	Practice Partner Recommendation
Processor	Dual core 2.0GHz+ or Quad core 1.8GHz+
RAM	4 GB per 40 users
System Drive	32 GB
Network Card	1 Gbps
Optical Drive (DVD)	Required
Video	1024x768
UPS (Battery)	1500VA or higher

Medium to Large Practices, (75-125 users: c-tree Server or SQL)

Medium to large practices that intend on using Microsoft SQL should be sure to adhere to the system requirements as stated by Microsoft. If you are going to implement Microsoft SQL, please contact Practice Partner Technical Support to discuss your specific hardware needs. The information below is intended as a starting point.

A typical Microsoft SQL implementation will include:

Database Server

- ☐ This server will house the Microsoft SQL database and run the associated services for those databases. It is possible that with large practices you may have multiple database servers in a clustered environment. Specific requirements include:
  - RAID-10 or higher for data files
  - RAID-1 for system
  - RAID-1 for redo transaction log
  - 32MB or higher RAID controller
  - Gigabit Ethernet
- ☐ Microsoft SQL 2005 must be on Windows 2003 Server (SP2).
- ☐ Windows NT 4.0 and Windows 2000/2003 Small Business Server are not supported.

Application Server

- ☐ This server will house the Practice Partner folder. This folder contains configuration files, client installation files, application error logs and other ancillary files not contained in a SQL database. This server also runs the Practice Partner services. (Please see Application Server Specifications on the previous page.)

Thin Client Server (optional)

- ☐ Windows Terminal Services or Citrix is required if you will be using Practice Partner in a wireless environment or when using a wide-area network/VPN. Optionally, a thin client server may be used in an environment to utilize older workstations or to use dumb terminals/thin client workstations. A thin client server can be Windows Terminal Services or Citrix 4.0 or 4.5. Please refer to the specifications listed in the **Thin Client Server (Terminal Services or Citrix)** section for thin client server recommendations.

Note: Practice Partner recommends a separate server for your relational database. This is recommended to eliminate a single point of failure, as well as provision for growth and expansion and prevent overtaxing a single server. While it is possible to run SQL on the same server as your PRACTICE PARTNER folder is housed, as well as run Terminal Services or Citrix, it is not recommended.

Large Practices (125+ users: Oracle)

Large practices using Oracle should be sure to adhere to the system requirements as listed by Oracle. Before any implementation, please be sure to talk to your account manager to arrange a conference call with a Practice Partner Technical Support Analyst to discuss your specific needs.

A typical Oracle implementation will include:

Database Server

- ☐ This server will house the Oracle database and run the associated services for those databases. It is likely that with large practices you may have multiple database servers in a clustered environment. Specific requirements include:
  - RAID-10 or higher for data files
  - RAID-1 for system
  - RAID-1 for redo logs, archive logs and rollback segments
  - 64MB or higher RAID controller
  - Gigabit Ethernet (possibly multiple controllers)
  - Windows 2003 Standard or Enterprise Server
  - Sun Solaris Version 9 and higher
  - HP-UX Version 11v3 and higher
- ☐ Oracle must be on Windows 2003 Server, Sun Solaris or HP-UX.
- ☐ Windows NT 4.0 and Windows 2000/2003 Small Business Server or any other UNIX / Linux is not supported.

Application Server

- ☐ This server will house the Practice Partner folder. This folder contains configuration files, client installation files, application error logs and other ancillary files not contained in an Oracle database. This server also runs the Practice Partner services.

Thin Client Server (optional)

- ☐ Windows Terminal Services or Citrix is required if you will be using Practice Partner in a wireless environment or when using a wide-area network/VPN. Optionally, a thin client server may be used in an environment to utilize older workstations or to use dumb terminals/thin client workstations. A thin client server can be Windows Terminal Services or Citrix 4.0 or 4.5. Please refer to the specifications listed in the **Thin Client Server (Terminal Services or Citrix)** section for thin client server recommendations.

Note: Practice Partner requires a separate server for your relational database. This is required to eliminate a single point of failure, as well as provision for growth and expansion and prevent overtaxing a single server. While it is possible to run Oracle on the same server as your PRACTICE PARTNER folder is housed, as well as run Terminal Services or Citrix, it is not supported in a large-scale environment.

Hard Drive Storage Space

Separate OS (operating system) and data partitions are required with the data partition preferably labeled P:\. The drive letter must be a non-conflicting network drive. C:\, D:\ and often E:\ are not good choices as these are frequently in use on client workstations/servers.

Planning for hard drive space is one of the most important decisions to make when purchasing a new server or servers. You want to make sure you have enough space so that you won't have to install new hard drives later down the road. It is easier to purchase hard drive space when you purchase your server.

The biggest space-user is scanning or imaging. If you do not plan on scanning documents or intend on doing very little scanning, you will want to provision 100 MB per full time (FTE) physician per year. If you plan on doing moderate to heavy scanning, you will want to provision 1GB to 10GB per FTE physician per year. If you plan on extensive scanning (for example, scanning in every record, every paper chart, etc.), you will want to provision 10GB to 50GB per FTE physician per year. When in doubt, over-estimate.

Storage space for images does not have to be on the same server as the Practice Partner folder. It can be on a separate file server if your organization already has a large storage solution already in place.

Keep in mind to scale your backup solution to suit your storage needs. You will need to have an appropriate backup solution to backup your entire database, including your images. Please make sure to plan to select a backup solution that will be adequate for your target server life (for example, if you have 5 physicians and plan on doing a large amount of scanning, you would provision up to 5 GB per year of storage per doctor, with a server life of 3-5 years, your backup solution would need to accommodate 75-125 GB).

All RAID configurations must be hardware driven (i.e., a hardware RAID controller)

Backup Hardware and Software

Backup is not optional; it is absolutely required.

- Have a disaster recovery plan in place. Test the recovery plan periodically to make sure that in the event of a disaster, you can recover your data and be functional in the shortest amount of time possible.
- Windows backup is not an acceptable backup.
- Your backup software should have a good graphical user interface (GUI) to make it easy to determine if you are getting backups.
- Use brand name products with a proven history such as Yosemite or Veritas (now Symantec).
- Use tape media. This allows for periodic archiving to cold storage and off-site storage of the backup.
- Scale the tapes and tape backup drive to match expected growth.
- Practice Partner recommends testing your backup at least 4 times a year to verify that your backup is viable. Multiple customers who have not followed this practice have suffered catastrophic failures.

Workstation, Laptop and Tablet PC Requirements

Practice Partner has developed the following requirements for your workstation(s). Please be sure to adhere to only Practice Partner-supported operating systems and specifications.

Operating System

Practice Partner has been tested and approved to operate on the following workstation operating systems.

Supported Workstation Operating Systems

- Windows XP Professional
- Windows XP for Tablet PCs
- Windows Vista Business or Windows Vista Enterprise
- Windows home versions are not supported

Standard Client or Laptop

A standard workstation is one that does not typically utilize a Terminal Services client or Citrix client to run Practice Partner. Actual data processing (such as report calculations) uses the resources of this computer. The specifications listed below are the minimum recommended requirements for Practice Partner.

	Windows XP	Windows Vista
Processor	2 GHz Pentium 4 or Pentium Dual Core	2 GHz Pentium 4 or Pentium Dual Core
RAM	1 GB	3 GB
System Drive	20 GB	20 GB
Network Card	100 Mbps	100 Mbps
Optical Drive (DVD)	Optional	Optional
Video	1024x768	1024x768
Power Protection	Small UPS (350VA)	Small UPS (350VA)

These recommendations do not include hardware/storage considerations needed for other applications.

Thin Clients

Practice Partner can be utilized in a thin client environment with a Terminal Server or Citrix server.

Practice Partner in a thin client configuration provides both advantages and limitations. Thin client requirements will vary based on your organization and workflow needs.

Peripherals

Printers

Practice Partner does not support USB printers.

Practice Partner highly recommends using all Hewlett Packard LaserJet networked printers (LaserJet 1300 or higher) with JetDirect connection. You must have a printer that has an available PCL5, 5e or 6 driver.

Reports, Charts and General Use Printers

Practice Partner recommends TCP/IP (networked) HP LaserJet printers.

Prescription Printers

You will need at least one dedicated prescription printer. More may be required depending on the physical layout of your office. Practice Partner recommends 1 prescription printer per physician. Prescription printers should be located where physicians can access them easily. We recommend HP LaserJet printers.

Fax Servers

A fax server allows you to fax prescriptions and other documents directly from your PC. It also allows you to receive faxes electronically and print only those necessary or attach them to your electronic medical records as linked files (instead of scanning them then linking).

Practice Partner recommends ZetaFax used with a Brooktrout fax board. ZetaFax and Windows Server 2003 fax server are both integrated and supported.

Scanners

You will need scanners to incorporate paper documents into your electronic medical records. Documents can be attached to electronic medical records in two different ways; as an image file or by using optical character recognition (OCR) software. Image files are actual pictures of the original document. Both methods of scanning documents require a third-party software solution. For OCR, Practice Partner recommends ScanSoft OmniPage Pro (up to version 14).

Networks and Infrastructure

Robust networks and infrastructure are a critical component of any modern software implementation. Practice Partner has developed the following requirements and recommendations to ensure a suitable environment for your Practice Partner implementation.

- ☐ 100 Mbps **fully switched** network or higher
- ☐ 802.11/g/n wireless networks with good signal strength in areas where wireless will be used (Windows Terminal Services or Citrix is required when using a wireless solution)
- ☐ Business class hardware from name brand vendors
- ☐ Anti-virus software deployed and configured properly for Practice Partner. See our list of restricted software on our anti-virus document.

- ☐ Backup solution and disaster recovery plan in place
  - Please make sure that a periodic review of backup and restore procedure is performed and a disaster readiness test is in place and tested.
- ☐ Category-5 or higher network cables installed and certified by professionals
- ☐ Battery backup is required for servers and recommended for workstations
- ☐ VPN users or wireless users must be using a thin client solution (Terminal Services or Citrix)
- ☐ Make sure to protect your network with a hardware firewall and wireless encryption (if applicable)

Interface Workstations and Servers

Depending on your configuration, you may require one or more interfaces, such as interfaces to laboratories, electronic claims submission (ECS) clearinghouses, third-party practice management systems, and so on.

Interfaces are typically installed on the file or application server where the PPART folder is located. In larger organizations with many interfaces, there may be a dedicated computer that runs the interface processes. Depending on the type of interface, it may be necessary to configure your network to incoming and outgoing connections to the server on specific ports. The interface implementation specialist will be able to inform the IT personnel about what is necessary to accomplish this.

The interface workstation/server must have remote access during setup, configuration, and testing of the interface that is available to Practice Partner 24 hours a day, seven days a week. We can connect through Bomgar, Citrix MetaFrame, or Remote Desktop (Terminal Services). This is essential to ensure a timely deployment of the interface.

Internet Based Support

A high speed internet connection is required for technical support from McKesson - Practice Partner. We use a secure internet tool that allows access to customer systems based on their approving that a connection be made.