



IT Recommendations & Checklist

practiX

iSOFT
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1 Document Objectives

The following specifications for practiX are a guideline provided to customers and their IT contractors to determine the hardware and third party software requirements. Consultation with an iSOFT representative and your hardware supplier will ensure hardware specifications are designed for your particular practice.

2 Important Notes

Please note this document is only a guide to the specifications recommended by iSOFT. Should you elect to use equipment below these specifications, degradation in performance will occur and may compromise the operation of your system. Also note, any new versions of software not stated in the specifications has not been tested with practiX and we may not be able to install or support the application.

2.1 32 vs 64-bit Operating Systems

practiX is a 32-bit application. While there are currently no supported 64-bit Operating Systems, iSOFT recognises that some practices may wish to implement this technology. Please note that this will not result in an upgraded performance of this application. iSOFT staff will not be responsible for the maintenance and/or successful operation of practiX in this environment.

The practices I.T staff will need to ensure that when connecting the ODBC's from the 64-bit Operating system, they will need to utilise the 32-bit version of the Microsoft Open Database Connectivity (ODBC) Data Source Administrator tool, which is located in the following path:

%systemdrive%\Windows\SysWoW64 folder\ Odbcad32.exe

2.2 MS Word

All workstations using the same Word templates must be using the same version of MS Word. iSOFT recommend using Microsoft Office 2003.

2.3 Backups

iSOFT is in no way responsible for data backups. This is the responsibility of the site and their I.T providers.

2.4 Virtual Servers or VMware

Please note that iSOFT does not support virtual server environments, and that we will not install practiX in these environments.

2.5 Windows Vista, Windows 7.

While Windows Vista and Windows 7 will run practiX, testing has not been completed for all versions of Medicare Online and is not currently supported by iSOFT. Our Support team will not install on these systems or assist with any Operating System related issues.

Please note that for installation, the account with the username "Administrator" on the Windows machine will need to be enabled and all permissions will need to be set to allow full control access to all practiX users.

2.6 General IT and Network Support

Please note iSOFT is not an IT provider for your network. iSOFT will support the practiX application however any other issues including networking, permissions and security are the responsibility of your chosen IT provider. Please note that wireless networks are not recommended or supported.

2.7 Help with this Document

Prospective clients (Sales Process)

If interested in purchasing practiX, please contact our iSOFT Sales Consultant on 02 8251 6700.

Existing clients

iSOFT Support on 1300 36 47 47 or primary.support@isofthealth.com, or your assigned iSOFT Solution Consultant or primary.implementation@isofthealth.com

3 Hardware Specifications

Please note that the following is only a guide to the minimum specifications by iSOFT. Should you elect to use equipment below these specifications, degradation in performance will occur and may compromise the operation of your system.

3.1 Workstations

- Intel Pentium 4 processor
- Quality 100/1000Mbps network card
- 40 Gb HDD (or greater)
- 512 Mb RAM (minimum, 2Gb or more recommended)
- Windows 2000 Professional, XP Professional
- MS Word 2000, XP, 2003 (MS Works Suite, MS Office Basic/Standard/SBE/PRO)
- Workstation displays should be configured for 1024x768 in high colour mode (800x600 is the minimum resolution supported).
- Up to date service packs for all software.

3.2 Minimum Server with 1-5 workstations and < 1Gb of data

- Workstation recommendations as above
- 2 Gb RAM (or greater)
- CD-Rom Drive
- Microsoft SQL Express 2005 (installed as the default instance)
- Backup solution (see attached Backup Recommendations)
- Up to date service packs for all software.

3.3 Minimum Server with 5-20 workstations or > 1Gb of data

- Intel Pentium 4 processor
- 80 Gb HDD (or greater)
- Fast disk subsystem with RAID 5 or disk mirroring (e.g. SCSI)
- Quality 100/1000Mbps network card
- 2 Gb RAM (or greater)
- CDRW or DVD
- MS Windows 2000/2003 Server or Small Business Server 2000/2003
- Microsoft SQL Server 2005 (installed as the default instance)
- MS Word 2000, XP, 2003 (MS Works Suite, MS Office Basic/Standard/SBE/PRO)
- Backup solution (see Backup Recommendations)
- Up to date service packs for all software including operating system, Microsoft Office and other third party applications.

3.4 Printers

No specific printer brands are recommended for use with the practiX Software however unlike "Classic", dot matrix printer support is not offered with practiX.

3.5 Other requirements

- 100 / 1000 Mbps network for all machines that are to be using the software.
- Permanent high speed internet connection (ADSL, cable)
- Interactive Uninterruptible Power Supply (UPS) is recommended for the server(s)
- practiX is not supported in a Thin Client environment. This includes Citrix, VNC, RDC and Terminal Services.

4 Backup Recommendations

iSOFT recommends clients should have a daily backup regime in place incorporating all the data created by the iSOFT practiX application.

Since the ultimate responsibility for the quality and reliability of the backup lies with the client and their chosen hardware provider, a solution the client and hardware supplier are comfortable with should be chosen. Please be aware iSOFT is not responsible for the backup of the system data in any way. It is the responsibility of the client to arrange for an IT qualified person (normally the hardware supplier) to configure and maintain their backup systems. The information provided is a guide and is in no way all-inclusive and should not be considered to be 'instructions' on how to backup your system.

iSOFT recommends the nominated competent person performs a 'test restore' on a regular basis to ensure that the backup system is working properly and that relevant practice staff members are trained by that competent person in how to check that the backup system is functioning correctly.

iSOFT Software Support is happy to provide any additional information regarding the data storage of our systems to your designated backup supplier to assist them in providing you with a backup strategy that is appropriate for your circumstances. Please contact the Support Team via email on primary.support@ibahealth.com.

The next points explain the two different data storage areas for the practiX application.

4.1 SQL Server Data

The iSOFT application uses Microsoft SQL Server to manage the practiX databases. In most instances, these databases are mspdata, msplocal and mspref. All three of these databases will need to be backed up. There are known issues surrounding the backing up of SQL database files while they are attached to a Microsoft SQL Server via traditional means.

Our recommended solution for this is to use backup software capable of backing up the SQL databases. Please verify with the backup software vendor if the software you are considering to use is capable of backing up SQL databases.

The other solution is to export the databases from SQL into a form that can be backed up via traditional means. This can be achieved either through SQL or through the database export function in practiX. If performed through practiX, this function should be performed manually through the main practiX application. Though this task can be scheduled through practiX, it is NOT recommended that this be relied upon to perform the export.

4.2 Attachments to the Database (eg Word documents, scanned images)

In addition to the SQL databases, practiX stores files externally which will also need to be backed up. It is our recommendation that the entire server's 'MSP' directory be backed up, along with the SQL databases.

5 Preferred Hardware Configuration

5.1 Network restrictions

Clients using iSOFT software must not configure their network using any of the following TCP/IP sub-nets:

192.168.0.0

192.168.20.0

192.168.200.0

192.168.20x.0 (i.e. anything above 192.168.200.0)

127.0.0.1

802.11 802.11B 802.11G 802.11N Wireless networks are not supported.

5.2 Preferred Server Configuration

5.2.1 Operating Systems

Less than 5 Workstations: Windows 2000 Professional or Windows XP Professional

More than 5 Workstations: Windows 2000/2003 Server

5.2.2 SQL Server

SQL Server should be configured to log on with a user account (e.g. 'sqlserver') and not the system account as is the default. The use of SQL Server replication is not compatible with the use of the system account.

5.2.3 Backup Recommendations

Please see Backup Recommendations within this document.

5.2.4 Networking

Protocol: TCP/IP. All PCs must be able to be located on the network both by IP address and by computer name.

5.2.5 User Configuration

Under normal circumstances, no special user setup or configuration is necessary. However, under some circumstances it may be necessary to run certain tasks that require changing registry settings, installation or registration of components or installation of applications. In some high security environments, this may not be possible to a 'standard' user. In such a scenario, iSOFT may require access to a user capable of performing such tasks (ie Administrator or equivalent).

5.2.6 Remote Access for iSOFT

iSOFT currently use an internet based remote support utility called Bomgar. The utility allows practice staff to allow iSOFT staff to access their machine through an internet connection (<https://securehelp.ibahealth.com>). In a high security environment, certain firewalls may prevent this access and hinder us assisting your the practice.

If using Windows Vista/Windows 7, please log iSOFT staff in to the Windows machines under the Administrator login. Please note: The use of Bomgar does not require the practice to purchase any software and is housed within iSOFT.

5.3 Preferred Workstation Configuration

5.3.1 Operating Systems

Windows XP Professional or 2000 Professional

5.3.2 Networking Connections

All workstations require a mapped network drive to the shared mspdata folder on the primary server (preferably L:\ & R:\). Users also require full access permission to the mspdata share.

5.3.3 ODBC Drivers

Each workstation should have the most recent available version of ODBC drivers installed for Microsoft SQL Server.

5.4 Other Information

5.4.1 Internet Access

Medicare On-line requires internet access from any PC it is to be used from. Additionally iSOFT remote support utility (Bomgar) requires internet access. It is highly recommended that all PCs have internet access for both of these tasks.

5.4.2 Printers

- Multi Tray Printers - For practiX purposes a multi Tray Printer requires a printer driver installed for each tray they will be printing to. Also in the printing preferences, the appropriate tray needs to be selected for the driver e.g. Driver: Tray1. Printing preferences: Tray1 etc.
- Single Tray Printers. A driver needs to be installed and set as the Windows default printer.
- Label printers
 - Labels for laser printers are supported (14 labels to an A4 page)
 - practiX supports the use of the Dymo Label Writers models 320 and 330 Turbo. Only the 'Shipping' label size is supported.

5.4.3 Display Settings

Workstation displays must be configured for at least 800x600 in high colour mode although higher resolutions are highly recommended.

Workstations using the Health Records module are highly recommended to run at 1024x768 or higher.

6 PractiX Networking, Security & SQL Server Requirements

6.1 Networking / Security

The installation and configuration of a functional and secured network are wholly the responsibility of the practice and their IT personnel. For the purposes of practiX, iSOFT assumes that the network, servers, and other components outside of practiX have been configured and are functional, and that all users have been granted rights appropriate to their requirements.

Due to the amount of data transfer, we recommend at least a 100Mbps network.

The ultimate requirement is for the network configuration to allow us to:

- Map a network drive on every PC to the server (and have full control of files via the mapped drive)
- Create ODBC connections to the SQL Server on the server (and be able to successfully run the ODBC administrators "Test data source" function)
- Access shared folders on the server (mspdata) using UNC pathnames (i.e. \\servername\mspdata) from any computer (and full control via the UNC path)
- Be permanently connected allowing automated after-hours processes to run, improving performance of in-hours operations.

6.2 Out-of-Office Remote access (eg Laptops)

- All the above points
- The server must have full access to the SQL Servers running at the remote PC
- This requires the account the SQL Server Agent service is using to have full access to the SQL Server running on the remote PC
- The server must be able to connect to the remote PC using this account
- All the computers should be logging onto the Domain in use by the server.

When a Domain is available all servers and workstations should be logging onto that domain. A 'User Group' should be created called 'practiX Users'. All users that need access to practiX need to be a member of this group. This group should be granted appropriate security access to any resources required to achieve all the points above. Before practiX can be installed, the name of the Domain and confirmation of the 'User Group' called 'practiX Users' will need to be supplied to the iSOFT Solution Consultant.

6.3 Firewalls

It is highly recommended, clients with any sort of internet connection, whether used by iSOFT or not, should consult with their network and hardware supplier about firewall requirements. iSOFT Support Team must be able to run Bomgar (<https://securehelp.ibahealth.com>) through the firewall to the servers at a minimum, preferably to all machines.

6.4 SQL Server 2005 vs SQL Express 2005

PractiX requires a version of Microsoft SQL server for the databases. We require a version of Microsoft SQL Server to be installed, configured and functional prior to the installation of practiX. Which version is most appropriate to the needs of the practice will depend upon the specifics of your practice. .

In many circumstances SQL Express is suitable, but has certain limitations which may make it un-suitable, for example,

- Lack of enterprise features support (e.g.: Replication which means it is not suitable for a practiX out of office connectivity environment)
- Limited to one CPU
- 1Gb memory limit for the buffer pool
- Databases have a 4Gb maximum size

Due to any of the above points you may require a full SQL Server product to be purchased and installed. Reference the Microsoft website for more information on SQL Express 2005, including a more in depth analysis of its limitations and installation instructions.

6.5 SQL Server 2008

Please note that SQL Server 2008 is not supported, and practiX will not run successfully on SQL Server 2008.

7 Third Party Software

A range of associated software is required to provide iSOFT practiX with a stable operating environment. We have chosen industry-leading products in each category and have ensured they integrate with practiX to provide a seamless environment that is transparent to the user.

7.1 Required Software

- **Microsoft Windows 2000, XP** - iSOFT has chosen Windows 2000, XP as platforms due to their strengths in the areas of usability, stability, redundancy, availability and scalability. Since release they have become industry standards and are well regarded in terms of reducing the total cost of ownership. Microsoft Vista has not completed testing within iSOFT however sites who have chosen to use Vista have not reported any ongoing problems. The versions of Medicare Online currently used with practiX is not compatible with Microsoft Vista.
- **Microsoft SQL Server 2000/2005 or SQL Express 2005** - SQL Server is a relational database management system offering performance, stability and scalability. This database management system has gained acceptance in the world market and is backed by the Microsoft name. If installing SQL Express 2005 instead of the standard SQL Server, we highly recommend the installation of the Management Console.

7.2 Optional Software

- **Microsoft Word 2003 and later versions (MS Office/Works Suite)** - Word 2003 is used to compile all letters and reports. Word is extremely powerful and offers spell checking and professional layout capabilities. Please note Word 2007 is currently undergoing internal testing through iSOFT however sites who have chosen to use this have not reported any ongoing problems.
- **Microsoft Exchange Server / Microsoft Outlook 2000** - Exchange Server and its client, Outlook 2003 will provide e-mail facilities to all users and allow communication with others (both internal and external) to the organisation.
- **Fenestrae Faxination for Microsoft Exchange** - Faxination is a stable and scalable add-on to Exchange Server that allows integrated processing of facsimile messages for the fully automated delivery of reports, as well as the ability to receive and distribute incoming facsimile messages.

8 Out of Office Connectivity Clients

- **Minimum requirements: 512/256k Broadband connection**
- **Recommended requirements: 1500k/512k Business Grade ADSL (and up)**
- **Full SQL Server on the main server**

The actual decisions about the implementation of out of office capabilities are up to the network / hardware provider and the client. iSOFT recommends a hardwired broadband connection, such as ADSL, as we believe it provides excellent reliability and communications latency. We will continue to recommend ADSL, if however the client chooses to use a different connectivity method the onus is on them if the system fails to perform as expected or is 'dropping out'.

8.1 SQL Server Replication

If Out of Office capacity is to be used iSOFT must be able to set up replication. iSOFT will be able to configure the SQL replication, however we may require the assistance of the site's IT provider.

8.2 Mapped drives and ODBC when working remotely

- The out of office site needs an L drive mapped to Mspdata locally and R drive mapped to mspdata on the main server
- The ODBC connections at the main site are cmspdata which links to the primary server. At the out of office site there are two ODBC connections – cmsplocal which links to the remote PC and cmspdata which links to the main server. The Solution Consultant can create the mapped drives and ODBC connections but you will need to ensure they will work with no permission issues.

Post Installation Information & Suggestions

- As practiX relies on mapped drives you may wish to have these mapping via a script during log-on
- practiX Services (mbspervices.exe) continuously runs on the server to perform tasks throughout the day (eg result importing, rosters, merging duplicate patients, refreshing screens)
- If results will continue to be downloaded to a workstation from the diagnostic companies then a mapped drive will need to be created from the server to this location to ensure results are imported to the server.
- The path for importing scanned document images or other files can be L:\import where L is the mspdata share on the server. This will allow any practiX PC to attach items efficiently. Multi-page single file document scanning is highly recommended to avoid multiple images which can only be stored and viewed one page at a time.