



CSC IT practiX Recommendations

CSC Healthcare
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1 Important information

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

Please note this document is only a guide to the specifications recommended by CSC. 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 practiX or associated products

CSC is a software services provider and is not an IT provider for your network. CSC will support the practiX application however any other issues including networking, permissions, backups and security are the responsibility of your chosen IT provider.

Prior to the installation of practiX for a new client, the CSC Solution Lead will provide and require an IT checklist to be completed. Please fax or email this checklist to the attention of the Solution Lead as the **scheduling and implementation of practiX will not commence until this checklist is received and approved by CSC.**

Any queries can be directed to our iResponse team in the first instance by phoning 1300 36 47 47 or emailing HG-iResponse@csc.com.

2 IT Specifications

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

2.1 Workstations

Quality 100/1000Mbps network card
10 Gb HDD (or greater)
1 Gb RAM Minimum
Windows XP or Windows 7
MS Word 2003, 2007 or 2010
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.

2.2 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 2008 or 2012 (installed as the default instance)
Backup solution (see section 3 for Backup Recommendations)
Up to date service packs for all software.

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

40 Gb HDD (or greater)
Fast disk subsystem with RAID 5 or disk mirroring (e.g. SCSI)
Quality 100/1000Mbps network card
4 Gb RAM (or greater)
CDRW or DVD
MS Windows Server/Small Business Server 2003 or Windows Server/Small Business Server 2008 R2
Microsoft SQL Server 2008 or SQL Server 2012 (installed as the default instance)
MS Word 2003, 2007 or 2010
Backup solution (see section 3 for Backup Recommendations)
Up to date service packs for all software including operating system, Microsoft Office and other third party applications.

2.4 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)
- **Adobe Reader 9.0** and later versions – Required for the correct display of health records and clinical results imported in an embedded PDF format.
- **.NET 4.0 Client Profile and Extended** – Required for components within practiX to operate correctly.

- **Java Runtime Environment version 1.4.2.17** – Required for Medicare Online software
- **Internet Explorer 8 or 9** - All PCs
- eHealth functionality (PCEHR, SHS, IHI) requires the following:
 - Server - 1Ghz minimum processor (2 Ghz or higher recommended)
 - Server - MS Windows Server/Small Business Server 2003 or Windows Server/Small Business Server 2008 R2
 - Server - Java SE 6 (update 26 or higher)
 - All PCs – SOAP Toolkit (soapsdk.exe installed)

2.5 Unsupported Systems/Environments

The following environments are unsupported either by practiX or a third party application such as Medicare Online.

- **Windows Server 2012**
- **Windows 8** – although not certified as yet there have been no reported issues with practiX and related functions in this environment. Until certification is achieved any issues due to Windows 8 will be investigated and reported to the practiX development team.
- **Thin Client** environment - this includes Citrix, RDP and Terminal Services. practiX is not certified for support in virtual server environments and no assurance is given that practiX can be installed and run without issue on these environments. Although not certified, practiX is running in these environments however issues are found, investigated and reported to the practiX development team for **possible** future changes to be incorporated into practiX.
- **Virtual Servers or VMware** - no assurance is given that practiX can be installed and run without issue in these environments. There are no outstanding reported issues in this environment. If any issues are found they are investigated and reported to the practiX development team for **possible** future changes to be incorporated into practiX.
- **Wireless Networks**

3 Backup Recommendations

CSC is not responsible for data backups which should be setup and managed by your preferred IT services provider.

CSC recommends clients should have a daily backup regime in place incorporating all the data created by the CSC 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 CSC is not responsible for the backup of the system data in any way. It is the responsibility of the client to arrange for a qualified person (normally the IT supplier) to configure and maintain the 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.

CSC 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.

CSC 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 HG-iResponse@csc.com

3.1 SQL Server Data

The CSC application uses Microsoft SQL Server to manage its 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.

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

In addition to the databases, practiX stores files externally to the databases which will also need to be backed up. At a minimum, the entire contents (including subdirectories) of MSPDATA on the server must be backed up (In addition to the above SQL databases). It is our recommendation the entire server's MSP directory is backed up.

4 Preferred Configuration

4.1 Network 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.

4.2 ODBC Drivers

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

4.3 User Account Control

Windows 7 workstations require User Account Control (UAC) turned off as practiX may not function with this feature turned on.

4.4 Internet Access

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

4.5 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.

4.6 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.

5 Other Requirements (detailed)

5.1 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, CSC 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.

5.2 Firewalls

It is highly recommended, clients with any sort of internet connection, whether used by CSC or not, should consult with their network and hardware supplier about firewall requirements.

practiX requires the following Firewall access from all PCs (unless specified):

- Bomgar (<https://securehelp.ibahealth.com>) – online access for practiX support
- practiX FTP (price/MIMS/ICPC/Notifications) – details can be provided at time of implementation
- **eRx – Electronic Script sending**
 - Port 3440 (inbound and outbound) must be open on the server
 - Depending on network security, you might also need to allow access to ***.erx.com.au.***
- Claim Manager (integrated EFTPOS and claiming) - details can be provided at time of implementation
- eHealth (PCEHR, SHS, IHI) - details can be provided at time of implementation

5.3 SQL Server 2008/2012 vs SQL Express 2008/2012

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 (eg 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
- SQL Express 2008 has a 10GB database size limit. SQL Express 2012 has a 10GB database size limit.

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 2008 or SQL Express 2012, including a more in depth analysis of its limitations and installation instructions.

SQL 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

5.4 Out of Office Connectivity Clients

Out of office and other remote connectivity is not supported by CSC due to the inability to guarantee any quality of service and requires the knowledge and judgement of the practice's IT provider to set up if appropriate.

6 Post Installation Suggestions

- As practiX relies on the mapped drives you may wish to have these mapping during log-on
- practiX Services (mspservices.exe) continuously runs on the server to perform tasks throughout the day (eg result importing, rosters, merging duplicate patients, refreshing screens), therefore the PC running practiX Services which is usually the server always needs a system user logged on but can be locked.
- 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.



7 Revision History

Date	Version	Description	Author
13/04/2012	1.0	Initial Version	Michael Soo
15/04/2013	2.0	Updated for relevant recommendations	Michael Soo
28/01/2014	3.0	Amended and Updated for relevant recommendations	Lisa Malley