



MedTech32 New Zealand
Hardware & Software Requirements
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Client/Server System Requirements

Below is a list of the minimum and recommended system requirements for an ideal MedTech32 Client/Server environment. The following requirements assumed both the Server and the Workstations will not be running any other applications or services other than MedTech32 and Borland Interbase.

Depending on the volume of transactions and the amount of digital images (such as scanned documents and digital camera photos) that need to be processed, as well as factors such as what other third-party applications or services are running on the computers (such as antivirus and backup software), the exact system requirements could vary.

If in doubt, please consult a MedTech Certified Engineer prior to purchasing any new computing equipment.

System Requirements	Minimum	Recommended
Server Requirements with up to 5 Workstations	Pentium 4 1.6GHz CPU.	Pentium 4 2GHz CPU.
	512MB RAM.	1GB RAM.
	40GB ATA100 or SATA1 HDD.	80GB ATA100 or SATA1 HDD.
	Power Surge Protector.	Standard UPS.
	Windows 2000 Standard Server or 2000 Professional or XP Professional.	Windows 2003 Standard Server.
Server Requirements with up to 10 Workstations	Pentium 4 2GHz CPU.	Pentium 4 2.4GHz or Xeon 2.4Ghz CPU.
	1GB RAM.	2GB RAM.
	80GB ATA100 or SATA1 HDD.	2 x 73GB SCSI160 or 2 x 80GB SATA1 HDD on RAID1.
	Standard UPS.	Smart UPS with Serial or USB Interface.
	Windows 2000 or 2003 Standard Server.	Windows 2003 Standard Server.
Server Requirements with up to 20 Workstations	Pentium 4 2.4GHz CPU.	Xeon 2.8GHz CPU.
	1GB ECC RAM.	2GB ECC RAM.
	73GB SCSI320 or 80GB SATA2 HDD.	2 x 73GB SCSI320 or 2 x 80GB SATA2 HDD on RAID1.
	Standard UPS.	Smart UPS with Serial or USB Interface.
	Windows 2000 or 2003 Standard Server.	Windows 2003 Standard Server.

System Requirements	Minimum	Recommended
Server Requirements with up to 30 Workstations	Xeon 2.4GHz CPU.	Xeon 3GHz CPU.
	2GB ECC RAM.	4GB ECC RAM.
	2 x 73GB SCSI320 HDD on RAID1.	3 x 36GB SCSI320 HDD on RAID5.
	Smart UPS with Serial or USB Interface.	Smart UPS with Serial or USB Interface + Redundant Power Supply.
	Windows 2000 or 2003 Standard Server.	Windows 2003 Standard Server.
Server Requirements with up to 50 Workstations	Xeon 2.8GHz CPU.	Xeon 3.4GHz CPU.
	2GB ECC RAM.	4GB ECC RAM.
	3 x 36GB SCSI320 HDD on RAID5.	3 x 73GB SCSI320 HDD on RAID5.
	Smart UPS with Serial or USB Interface.	Smart UPS with Serial or USB Interface + Redundant Power Supply.
	Windows 2000 Advanced or 2003 Enterprise Server.	Windows 2003 Enterprise Server.
Additional Server Requirements	Floppy Disk Drive.	Floppy Disk Drive.
	CD or DVD Optical Drive.	CD or DVD Optical Drive.
	Tape or DVDRW Drive (for data backup).	Tape or DVDRW Drive (for data backup).
	Fast Ethernet NIC (running TCP/IP protocol only).	Fast Ethernet or Gigabit Ethernet NIC (running TCP/IP protocol only).
	Internal Hardware Modem or External Serial Modem (if running FaxTech).	Internal Hardware Modem or External Serial Modem (if running FaxTech).
	Dial-up Internet Connection with Antivirus & Firewall Protection (if running HealthLink.)	Broadband Internet Connection with Antivirus & Firewall Protection (if running HealthLink.)
Workstation Requirements	Pentium II or Equivalent.	Pentium III or Equivalent.
	256MB RAM.	512MB RAM
	800MB Free HDD Space.	800MB Free HDD Space.
	Ethernet NIC (running TCP/IP protocol only).	Fast Ethernet NIC (running TCP/IP protocol only).
	Power Surge Protector.	Power Surge Protector.
	Windows 2000 Professional or XP Professional.	Windows XP Professional.

Peer-to-Peer System Requirements

NOTE: MedTech does NOT recommend Peer-to-Peer networks under any circumstances or environment. Client/Server architecture is always the preferred deployment solution (please refer to the "Client/Server System Requirements" section above).

For small networks running a Peer-to-Peer configuration, where the server is also used as a workstation, you will require a minimum specification as follows:

System Requirements	Type	Minimum
Peer-to-Peer Server Requirements	CPU	Pentium 4 2GHz CPU.
	Memory	1GB RAM.
	Hard Drive	80GB ATA100 or SATA1 HDD.
	Operating System	Windows 2000 Professional or XP Professional.
	Additional Requirements	Refer to "Additional Server Requirements" as stated in the "Client/Server System Requirements" section above.

Network Requirements

Network Requirements	Type	Recommended
Network Bandwidth Requirements	Server Segment	1Gbps Gigabit Ethernet.
	Client Segment	100Mbps Fast Ethernet.
	Backbone	1Gbps Gigabit Ethernet.
	WAN	Secured Virtual Private Network via public network or Dedicated private network.
	Internet	Broadband Internet, with proper security measures such as Antivirus & Firewall Protection.
Network Device Requirements	Network Interface Card	For medium to large networks: - Simple Network Management Protocol (SNMP) compatible.
	Layer 1 Device or Hub-less configuration (NOT recommended)	NOT recommended: - Layer 1 Hub. - Cross-over cabling.
	Layer 2 Device	For small networks: - Unmanaged Layer 2 Switch. For medium to large networks: - Managed Layer 2 Switch with SNMP support.
	Layer 3 Device	As required to isolate MedTech32 segment from other LAN/WAN segments.
Network Cabling Requirements	Cable Type	Unshielded Twisted Pair (UTP) Category 5e or Category 6 certified.
	Connector Type	Registered Jack RJ45.
	Certification	All cabling segments tested and certified for TIA/EIA-568-B standard.
Firewall / Proxy Requirements	Interbase	TCP Port 3050.
	MedTech32	UDP Port 300.

Printing Requirements

Printer Requirements	Type	Recommended
Printer Requirements	Driver Compatibility	Windows Driver Model (WDM) compatible.
	Driver Language	Recommended: <ul style="list-style-type: none"> - Printer Control Language (PCL). - PostScript (PS). NOT Recommended: <ul style="list-style-type: none"> - Other manufacturer proprietary languages.
	Paper Size	MUST be capable of handling both A4 and A5.
	Manual Feed (optional)	For printing pre-formatted forms and letterheads if required.
	Multiple-Trays (optional)	For handling different paper types and paper sizes without manually changing/feeding papers if required.
	Label Printing (optional)	For printing laboratory and mail merge labels if required.
Recommended Printer Models	Recommended (general)	Any Hewlett Packard LaserJet printers.
	Recommended (label)	Any Dymo Label printers.
	NOT Recommended	Any all-in-one multifunction printers.
	Kyocera Incompatibility	It has been reported Kyocera printers may cause intermittent illegible document printouts from MedTech32.

Printer Deployment Considerations

- If the practice will be printing on both A4 and A5 papers, then two separate instances of the printer will need to be installed and configured for each paper size.
- When configuring multiple-trays printers in Windows, aside from installing one instance of the printer for each paper size, you will also need to INACTIVATE or DISABLE or make NOT AVAILABLE the unused trays. Any auto-tray-select features will also need to be DISABLED.
- Network Printers with their own IP Addresses will need to be installed as LOCAL printers on the workstations to work efficiently with MedTech32.
- Remote printers will also need to be installed as LOCAL printers on the Terminal Services Server for these printers to work properly in Terminal Services Client sessions.
- "Automatic" Client Printer Mappings should be disabled in Terminal Services Client sessions. Instead, "Static" Server Printer Mappings should be created via Windows logon scripts.
- Even though no users will be logging onto the MedTech32 Server, a dummy printer MUST be installed on the Server for MedTech32 to function properly.
- All printer names, driver names, and port names MUST conform to the MedTech32 naming convention, i.e. less than 64 characters in length, and avoid using spaces and symbols like \ / : * ? " < > | in the names.
- It has been reported Kyocera printers may cause intermittent illegible document printouts from MedTech32. If the use of Kyocera printers cannot be avoided, Mini PCL5e drivers should be used instead of KX Extended or KPDL drivers. Please consult a MedTech Certified Engineer to perform proper testing prior to deploying any Kyocera printers.

Scanning and Digital Imaging Requirements

Printer Requirements	Type	Recommended
Scanner / Digital Camera Requirements	Driver Compatibility	MUST be TWAIN compatible.
	Image Format Compatibility	Scanning Module Support: - Tagged Image File Format (TIFF). Drawing Tool Support: - Bitmap (BMP). - Graphics Interchange Format (GIF). - Joint Photographic Experts Group (JPEG). - Tagged Image File Format (TIFF).
	Paper Size	Capable of handling A4.
	Automatic Document Feeder (optional)	For scanning multiple documents if required.
Recommended Scanner Models	Recommended	- Canon DR-2050C or DR-2580C. - Kodak I30 or I40.
	NOT Recommended	Any all-in-one multifunction printers.

MedTech32 has been FULLY tested with the following scanners:

Canon DR-2050C (Recommended)

- It allows for easy setup and integration (TWAIN compatible).
- Scans up to 20 pages per minute or 38 images per minute.
- Built-in Automatic Document Feeder – allows scanning up to 5mm stack or 50 sheets of 80 gsm A4 paper in one go.
- Hi-Speed USB 2.0 interface (cable included).
- Fits in any work space – small and compact design.

Please contact MedTech Sales for further information on 09 358 0116 (Option 2) or e-mail nzsales@medtechglobal.com.

Canon DR-2580C (Recommended)

- It allows for easy setup and integration (TWAIN compatible)..
- Scans up to 25 pages per minute or 50 images per minute.
- Built-in Automatic Document Feeder – allows scanning up to 5mm stack or 50 sheets of 80 gsm A4 paper in one go.
- Hi-Speed USB 2.0 interface (cable included).
- Fits in any work space – small and compact design.

Please contact MedTech Sales for further information on 09 358 0116 (Option 2) or e-mail nzsales@medtechglobal.com.

Kodak i1200 (Recommended)

- It allows for easy setup and integration (TWAIN compatible).
- Scans up to 30 pages per minute or 50 images per minute.
- Scans up to a recommended 1,500 pages per day
- Built-in Automatic Document Feeder – allows scanning up to 50 sheets of 75 gsm A4 paper in one go.
- Dual CCD scanning technology.
- Hi-Speed USB 2.0 interface (card and cable included).
- Fits in any work space – small and compact design.

Please contact MedTech Sales for further information on 09 358 0116 (Option 2) or e-mail nzsales@medtechglobal.com.

Scanner Deployment Considerations

- MedTech32 can only interface with TWAIN compliant scanners. Aside from the recommended scanner models listed above, MedTech CANNOT guarantee other brands or models can be fully integrated with MedTech32. It has been reported many all-in-one multifunction devices could cause compatibility issues or could limit scanning functionalities when scanning within MedTech32. If in doubt, please consult a MedTech Certified Engineer to perform proper testing prior to deploying any scanners.
- Network scanners should be installed as LOCAL scanners, i.e. TWAIN driver is locally detectable for MedTech32 Scanning to work.
- Scanning via Citrix and Terminal Services sessions is not supported.
- Duplex scanning is not supported unless all papers to be scanned have information on both sides.
- In order to scan multiple pages you will need to disable the Graphical User Interface of the scanner driver.

32-Bit Operating Systems Support

Supported Server Operating Systems	Windows 2000 Server
	Windows 2003 Server

Supported Workstation Operating Systems	Windows 2000 Professional
	Windows XP Professional

NOTE: MedTech32 DOES NOT support the following versions of Microsoft Windows. Although it might be possible to run MedTech32 on these operating systems, MedTech WILL NOT be able to provide support if a practice encounters problems while running on these Windows versions.

Non Supported Server Operating Systems	Windows NT 3.51 Server or earlier
	Windows NT 4.0 Server
	Any non-Windows OS

Non Supported Workstation Operating Systems	Windows 95 or earlier
	Windows 98
	Windows Millennium Edition
	Windows XP Home Edition
	Windows XP Media Centre Edition
	Windows NT 3.51 Workstation or earlier
	Windows NT 4.0 Workstation
	Any non-Windows OS

64-Bit Operating Systems Support

NOTE: MedTech DOES NOT recommend deploying MedTech32 in a Windows 64-Bit operating systems environment – due to the fact that the current versions of both MedTech32 and Borland Interbase are 32-Bit based, and no software testing are being conducted on any 64-Bit operating systems environment at this stage.

Although it might be possible to run MedTech32 on Windows 64-Bit, MedTech WILL NOT be able to provide support if a practice encounters problems while running on any 64-Bit Windows versions.

Vista Operating Systems Support

NOTE: MedTech Software is currently undergoing formal compatibility testing on the recently released Windows Vista operating systems.

Until MedTech Software can confirm Windows Vista operating systems are compatible with MedTech32, please **DO NOT** attempt to upgrade your current systems to any Windows Vista versions.

WARNING: MedTech **WILL NOT** be able to provide any support to sites who have upgraded to Windows Vista until formal testing has been passed.

For sites that might be upgrading to Windows Vista soon, please be aware that MedTech only plans to support the following editions in line with our currently supported operating environments:

"To-Be" Supported Vista Editions	Business Edition (32-bit only)
	Ultimate Edition (32-bit only)
	Enterprise Edition (32-bit only)

Non Supported Vista Editions	Starter Edition
	Home Basic Edition
	Home Premium Edition

The amount of time before MedTech can support the above listed operating systems is dependant on whether any modifications or development is required to achieve compatibility.

It should be noted by all sites that both Borland **DO NOT** currently support Interbase on Windows Vista officially. This implies that until Borland can provide Vista compatibility updates or new versions for Interbase, MedTech **MIGHT NOT** be able to fully support Windows Vista for MedTech32.

We will inform sites of the results of this compatibility testing as soon as we can confirm compatibility.

Macintosh Operating Systems Support

NOTE: MedTech **DOES NOT** recommend deploying MedTech32 on any Macintosh computers that runs any Windows operating systems – regardless of whether Windows is run in emulation mode on a Motorola-based MAC, or in native mode on an Intel-based MAC.

Although it might be possible to run MedTech32 on Macintosh computers, MedTech **WILL NOT** be able to provide support if a practice encounters problems while running on any MAC machines.

Server Deployment Considerations

- Due to performance issues, it is NOT recommended to install Interbase and MedTech32 on ANY server (Small Business Server or otherwise) that is utilised by other resource-hungry functions, such as Domain Controller, Domain Name System (DNS), Windows Internet Naming Service (WINS), Dynamic Host Configuration Protocol (DHCP), Exchange, Internet Information Services (IIS), Internet Security and Acceleration (ISA), SharePoint Services, etc. Instead, a dedicated server should be allocated to serve Interbase and MedTech32 requests only. If this cannot be avoided, please consult a MedTech Certified Engineer to perform proper load testing prior to deploying the server.
- Due to compatibility issues, it is NOT recommended to install ANY OTHER Database Management System (DBMS) on the Interbase Server, such as SQL Server (including 2000 Desktop Engine and 2005 Express Edition), Firebird, Informix, Oracle, Sysbase, etc. If this cannot be avoided, please consult a MedTech Certified Engineer to perform proper compatibility testing prior to deploying the server.
- Due to performance and compatibility issues, it is recommended by Borland, NOT to install Interbase (and therefore MedTech32) on ANY Citrix or Terminal Server. Instead, a dedicated Citrix or Terminal Server should be setup as an Interbase and MedTech32 Client to serve Citrix or Terminal Client sessions. Besides, MedTech32 utilities such as Scheduler and NIR Directory Monitor are not compatible with Citrix or Terminal Server environment.
- Due to performance and data integrity issues, it is NOT recommended to enable ANY system restore applications or services on the Interbase databases (i.e. .GDB or .IB files), such as Windows XP System Restore, Distributed File System (DFS), Volume Shadow Copy Service (VSS), Symantec LiveState Recovery, Acronis True Image, etc. Instead, Interbase Backup should be used to perform online backups of the databases.
- Due to performance issues, it is NOT recommended to allow users to use the Interbase and MedTech32 Server as a workstation, i.e. DO NOT leave the local console in a logged in state.
- Where Windows 2003 Server Service Pack 1 or Release 2 is installed, ensure Windows Firewall has been DISABLED or exceptions have been created to allow Interbase and MedTech32 traffic to pass through (please refer to the "Network Requirements" section above).

Client Deployment Considerations

- If the workstations fall below the minimum hardware requirements (please refer to the "Workstation Requirements" section above), it is recommended to use Citrix or Terminal Server to deploy MedTech32.
- Microsoft Terminal Services together with Virtual Private Networking (VPN) is also a proven solution in providing remote access to your MedTech32 clients.
- Running any applications (such as MedTech32) under Microsoft Terminal Services could result in slower program response as compared to the recommended Client/Server setup. The response time is dependent on the Terminal Server's hardware specifications.
- Citrix Server is also a proven solution in deploying MedTech32 on multi- sites practices in lieu of Microsoft Terminal Services.
- In Citrix, "Client Clip Board Mapping" should be DISABLED as a policy for all client sessions that require access to MedTech32, in order to ensure MedTech32 Outbox Wizard will function properly.
- In Terminal Services, if the connection is a "Fat Client" (e.g. a computer with Windows 2000 or XP Professional) "Clipboard mapping" should be DISABLED as a policy for all client sessions that require access to MedTech32, in order to ensure MedTech32 Outbox Wizard will function properly.
- In Terminal Services, if the connection is a "Thin Client" (e.g. a terminal with Windows CE or similar Thin Client operating system) AND is using a Remote Desktop Connection, "Clipboard mapping" should be ENABLED as a policy for all client sessions that require access to MedTech32, in order to ensure MedTech32 Outbox Wizard will function properly.
- Where Windows XP Professional Service Pack 2 is installed, ensure Windows Firewall has been DISABLED or exceptions have been created to allow Interbase and MedTech32 traffic to pass through (please refer to the "Network Requirements" section above).
- Windows Display Properties MUST be set to a minimum resolution of 800 x 600 pixels; whereas the font size MUST be set to "Small Fonts" or "Normal size", i.e. 96 DPI.

Interbase Deployment Considerations

Interbase Version 7.1

- Interbase 7.1 SP2 (version 7.1.0.189) is the highest Interbase version that has passed software testing with MedTech32. It is HIGHLY recommended that all sites should be running this Interbase version.
- Although Interbase 7.5 has already been released, this has yet to pass formal testing, and thus MedTech WILL NOT be able to provide support if a practice encounters problems while running on Interbase 7.5 or newer.
- Interbase 7.1 DO NOT support any AMD or Intel dual-core processors.

Interbase Version 7.0

- It is HIGHLY recommended to upgrade to Interbase 7.1 SP2.
- Borland has identified an issue with Interbase 7.0 running on any Intel processors that has Hyper-Threading enabled. Hyper-Threading MUST be DISABLED on the motherboard BIOS in order for Interbase Server to function properly. This issue has been resolved in Interbase 7.1.
- Interbase 7.0 DO NOT support any AMD or Intel dual-core processors.

Interbase Version 5.6

- Borland has officially ceased supporting Interbase 5.6. It is HIGHLY recommended to upgrade to Interbase 7.1 SP2.
- Interbase 5.6 DO NOT support the following type of processors:
 - § Intel processors that has Hyper-Threading enabled.
 - § AMD or Intel dual-core processors.
 - § Symmetric MultiProcessing (SMP), i.e. multiple processors.
- If running on any Intel processors with Hyper-Threading, Hyper-Threading MUST be DISABLED on the motherboard BIOS in order for Interbase Server to function properly.
- Interbase 5.6 has a database file size limit of 2GB per file, regardless of the file system being used. If an Interbase database is over 2GB in size, it MUST BE split into multiple files of 2GB each in order to avoid database corruptions.
- BriefCasing IS NOT supported on Interbase 5.6 where database size is over 2GB. It is recommended to upgrade to Interbase 7.1 in order to ensure BriefCasing will function properly on any databases that are over 2GB.

Third-Party Software Integration Considerations

Nuance Dragon NaturallySpeaking Integration

- Dragon NaturallySpeaking Medical 9 is a proven solution in dictating Consultation Notes and Outbox Documents into MedTech32.
- It allows users to easily jump between commonly used functions by voice.
- It provides voice playback within MedTech32, allowing easy correction of dictated text.
- Users can also setup predefined text blocks into easily recalled voice Macros, allowing inserting commonly used phrases, sentences and paragraphs for diagnosis and consultation purposes.

Please contact MedTech Sales for further information on 09 358 0116 (Option 2) or e-mail nzsales@medtechglobal.com.

Adobe Acrobat Integration

- MedTech32 Patient Information Sheets can only work with Acrobat version 4 or 5. Any newer versions of Acrobat are not supported.
- Each computer that requires access to the Patient Information Sheets will need to have Acrobat installed.

Critchlow GeoStan NZ Integration

- Due to performance issues, it is recommended to install GeoStan NZ on a standalone workstation only, i.e. DO NOT install GeoStan NZ on the MedTech32 Server and DO NOT install on all workstations.

HealthLink SIX Integration

- HealthLink SIX should be installed on the same computer that will run MedTech32 Message Transfer and NIR Directory Monitor utilities.

Microsoft Excel and Word Integration

- According to the Service Level Agreement, MedTech will only support the latest commercially available version of Excel and Word, plus one version back, i.e. 2003 (version 11) and XP (version 10).
- Each computer that requires access to the Outbox Word Documents will need to have Word installed.
- Each computer that requires the ability to export data from MedTech32 Query Builder for analysis will need to have Excel installed.
- It is recommended to disable Office Clipboard features to ensure MedTech32 Outbox Wizard will function properly.

NOTE: MedTech Software is currently undergoing formal compatibility testing on the recently released Excel and Word 2007 (version 12).

Until MedTech Software can confirmed Office 2007 applications are compatible with MedTech32, please DO NOT attempt to upgrade your current systems to any Office 2007 versions.

WARNING: MedTech WILL NOT be able to provide any support to sites who have upgraded to Office 2007 until formal testing has been passed.

The amount of time before MedTech can support Excel and Word 2007 is dependant on whether any modifications or development is required to achieve compatibility.

We will inform sites of the results of this compatibility testing as soon as we can confirm compatibility.

Third-Party Fax Software Integration

- FaxTech is the only fax application that can integrate with MedTech32 Address Book. If any other third-party fax software is used instead, users will be required to maintain a separate address book in the third-party software.

Should you require any assistance or have any questions, please do not hesitate to contact the MedTech Helpdesk on 09 358 0116 (Option 1).