

SYSTEM REQUIREMENTS FOR CENTAUR APPLICATIONS

Revised: 04/05/2018

(Valid for 60 Days from Last Revision)

BASE SPECIFICATION FOR i4 – i5 (PREVIOUS VERSIONS ARE NOT SUPPORTED)

This document is intended as a guide when integrating Dental4Windows^{sql} or Practice Studio^{sql} into your practice. If you intend to integrate digital x-ray and (or) other business applications into your practice, it is suggested that you obtain the requirements for the respective software from the vendor and consider their requirements as well. Larger practices may need the assistance of a network specialist.

SERVER

COMPONENT	1-4 USERS	5-12 USERS	13+ USERS
CPU	Dual Core 2.0GHz +	Dual Core 2.6GHz +	Call Us
RAM	4 GB	4 - 8 GB	Call Us
HDD	160 GB 7200 RPM	250 GB 7200 RPM	Call Us
Optical Drive	DVD		
Network Card	1000 Onboard		Call Us
Graphics Adaptor	Capable of 1024 x 768 or higher resolution		
Operating System*	Windows 10 [®] (32/64 Bit) Windows Server 2016 [®] (64 Bit) Windows Server 2012 [®] R1/R2 & Essentials & Foundation (64 Bit) <hr/> Windows 8/8.1 [®] (32/64 Bit) * Windows 7 [®] (32/64 Bit) * Windows Home Server/SBS 2011 [®] (64 Bit) * Windows Server 2008 [®] R1/R2 & SBS (32/64 Bit) *		

* For more information supported on Operating Systems please refer to section 2.13 below.

CLIENT

MINIMUM REQUIREMENTS
Dual Core 2.0GHz +
4 GB
80 GB 7200 RPM
DVD
100 Onboard
Capable of 1024 x 768 or higher resolution
Windows 10 [®] (32/64 Bit) <hr/> Windows 8/8.1 [®] (32/64 Bit) * Windows 7 [®] (32/64 Bit) *

MODULE REQUIREMENTS

MODULE	REQUIREMENTS
Word Link	- Microsoft Word* 2013/2016 [®] on all computers where you will want to generate Letters/Recalls/Etc
SMS	- Internet Connection
HICAPS	- HICAPS Terminals can connect via either an onboard USB port or onboard COM port (depending on the cable you receive). Ensure you have the appropriate port on your computer(s) where the terminal will be connected. Contact HICAPS for more information!
Email	- Internet Connection - To receive replies: Microsoft Outlook* 2013/2016 [®] or SMTP Based POP3 Email Account (i.e. Hotmail)
PDA Link	- Microsoft Outlook* 2013/2016 [®] on the computers where you want to link with.
xPlain PE	- Colour Printers for the patient leaflets is preferable. In order to print these leaflets there must be a program that can read .DOC files installed (E.g. Microsoft Word, Open Office)
3D Charting	- CPU with integrated GPU such as Intel [®] iSeries (i3, i5, i7) or AMD [®] APU's or - DirectX 9 compliant modern dedicated Graphics Card <i>^Please note that if you are using any hardware below these specifications this may cause performance issues when using 3D Charting</i>

* Refer to section 2.14 for more details on supported links with Microsoft Office.

BEST PRACTICES GUIDE FOR CENTAUR APPLICATIONS

BEST PRACTICES FOR i4 – i5 (PREVIOUS VERSIONS ARE NOT SUPPORTED)

*Both Dental4Windows^{sql} and Practice Studio^{sql} will be referred to as Centaur Applications in the following document.

1. PRACTICE REQUIREMENTS

ITEM	STRONGLY RECOMMENDED	MINIMUM REQUIREMENTS
Remote Access	NBN (FTTP > FTTC > HFC > FTTB/N) ADSL2+ Broadband Modem/Router	Dial-Up Modem (Please note that if a Dial-Up Modem is used SLA timings do not apply.)
Printer	Modern Printer with Support from Manufacturer NOTE: Some printing problems can be resolved by installing the latest printer drivers. Ensure that your technician installs the latest drivers for your particular printer, now and in the future.	
Network	Fast Ethernet or Gigabit Switch with 1 port per computer (additional ports may be needed for other Network Devices (ie. Network Printer, Internet Modem/Router and future expandability).	

2. ADDITIONAL NOTES

2.1. MOTHERBOARD/CPU

- While *Centaur Applications* should work on non-Intel processors, they are not tested or certified.
- Ensure that your computer is certified for your operating system (refer to the Operating System section for details).
- We recommend the use of Desktop and Server grade CPU's. While Netbook/Mobile grade CPU's (ie: Intel's Atom CPU) will run *Centaur Applications* you may notice slow performance using Netbook/Mobile grade CPU's.

2.2. OPTICAL DRIVE

- DVD-ROM's are required on all computers to perform upgrades where Internet Upgrades are not being used.

2.3. DISPLAY ADAPTOR

- Centaur Applications* require a 1024*768 or higher resolution.

2.4. HARD DRIVE

- The hard drive is the most commonly overlooked specification, but is a very important component of a computer (particularly the speed of the hard drive).
- Note that the specified free space is only for *Centaur Applications*. If you intend to install digital x-ray software (or any other software) you should contact the respective software vendor for their requirements.
- Large network users (6 user and above) should consider SCSI hard drives on the Server for added performance.
- RAID technology is not necessary, but may be desirable for added data redundancy and throughput. Note that the RAID solution should never be the only backup solution. RAID is not a replacement for a good backup solution that involves the rotated use of separate removable media. Please contact a Network Technician if you wish to utilise this service. In case of RAID failure, Centaur Software can only offer limited support.

2.5. RAM

- Dynamic RAM is not supported when using *Centaur Applications*.

2.6. BACKUP DEVICE

- Please see the "*Backup Guide for Centaur Applications*"
- Note that Centaur Software does not setup, configure or support the various types of backup methods. Please refer to your IT Technician.

2.7. UPS

- Uninterruptable Power Supplies are recommended for all Server computers. 400VA/240W or higher Delta Online UPS with Shutdown software are recommended.

2.8. HARDWARE FIREWALL

- Offices that are connected to the Internet via broadband access should definitely have a hardware firewall to protect their computers from attack.
- Internet sharing software (or any other software) that causes interference with the TCP/IP protocol that affects *Centaur Applications* will have limited support.

2.9. ANTI-VIRUS/FIREWALL SOFTWARE

- Anti-Virus software should be installed on all computers. If you are a network user then you should look at an antivirus software solution that will “push” the virus updates out to all computers on the network via the computer that has the internet connection.
- We recommend that the following executables are excluded from your Firewall Software:

Centaur Applications (i5)

(a) DBSRV16.exe (b) DBENG16.exe (c) D4w97.exe

Centaur Applications (i4)

(a) DBSRV12.exe (b) DBENG12.exe (c) D4w97.exe

HICAPSConnect

(a) HicapsConnectClient.exe (b) HicapsConnectServiceController.exe (c) HicapsConnectService.exe
(d) HicapsConnectDiagnosis.exe

- We recommend that the following ports are excluded from your Firewall Software:

Sybase	UDP port 2638
HICAPSConnect	TCP port 11000 and UDP port 11001

- It is strongly advised that to avoid potential performance problems, or even corruption, the following files be excluded from virus scans:
 - (a) Main Database File (.db)
 - (b) Transaction Log (.log)
 - (c) Transaction Log Mirror (.mlg)

2.10. NETWORKING

- Centaur Software supports its products running over both wired and/or wireless networks. If there is an issue with your network affecting the use of our products you may be required to seek the services of an IT Technician to assist in resolving the issue.
- Centaur Software **strongly** recommends that wired networks are used over wireless networks due to the inherent issues that may affect a wireless network. Common issues that occur when wireless networks are used include: application dropouts, poor performance issues, network interference, etc. If a customer decides to use a wireless network then it is recommended they talk to their IT Technician to setup a secure, stable and fast network. In order to troubleshoot issues with running our products over a wireless connection we may require the user to recreate the issue after making a physical (LAN) connection. If the issue cannot be created with a physical connection we cannot guarantee a fix.
- The performance of *Centaur Applications* may vary based on any number of conditions outside of our control such as: Wireless Interference of other devices, other Wi-Fi broadcasts, building infrastructure, Wi-Fi Hardware, etc. For ways to improve the performance of your Wireless Network we recommend you obtain the services of an IT Technician.
- Network users should consider the purchase of a network printer (ie. a printer that is not physically connected to a computer).
- Customers with 6 Users and above should consider a dedicated database server.
- If you intend to use the database server as a workstation then the RAM specification should be increased.
- All practices should have CAT5E 100MB Twisted cabling or higher. A professional electrician should install and certify that the cabling meets the appropriate standards.
- Please note: customers with Server Computers that contain multiple active Network Interface Cards (NIC), onboard or add-in cards, the *Centaur Applications* may generate a different Computer Identification Number (CIN) each time the Server is restarted. Centaur will provide you with each of these codes for you to record. When this occurs you will need to manually enter in the appropriate Registration Code for that CIN the first time the D4w/PSS/CMS interface is started. Alternatively you can disable all but one NIC.

2.11. RDC/TERMINAL SERVICES/CITRIX/VIRTUALISATION

- Terminal Services/Citrix Metaframe may be a consideration if you have a large network (i.e. 15 Users and above). Terminal server sites that have 6 or more remote connections should consider a dedicated terminal server (i.e.: a server dedicated to serving the terminal server sessions only). All terminal server sites that require remote connections should purchase business ADSL plans, not plans that are home-user orientated.



Centaur Software can only offer advice on how our applications will work on Terminal Service/Citrix Metaframe. We are unable to advise on installation/configuration of this complicated networking scenario.

You will need an IT specialist in this area to advise, install, maintain and for support problems that are related to this area).

- Running *Centaur Applications* directly over a WAN connection is **not** supported.
- If you want to run Windows[®] under a Virtual Environment, please contact Centaur Support as some configurations are not supported. Sybase will support Sybase products running on VMware as long as the OS running in the virtual machine is certified by Sybase (<https://blogs.sap.com/2014/12/02/licensing-sap-sql-anywhere-in-virtual-environments/>).
- 3D Charting and other video intensive modules in these operating system environments require special considerations that we can advise your IT Specialist.
- Terminal Server software such as ThinStuff, XP Unlimited, etc are not supported by Centaur. In addition we strongly recommend customers contact Microsoft before purchasing any such program to ensure their intended use does not violate Microsoft’s Windows Licensing.

2.12. HICAPS TERMINALS

- The HICAPS Terminal can be provided with a variety of PC connection options. Please ensure your computers that will connect to the HICAPS Terminals have the correct ports available.

2.12.1. Compatibility Issues with HICAPS

- The latest version of HICAPS software called "HICAPSConnect" (version: 1.0.3.32) is supported on the following operating systems (both 32 Bit and 64 Bit):

Windows 7[®], Windows 8.1[®], Windows 10[®]

Windows Server 2003[®], Windows Server 2008 R1/R2[®], Windows Server 2012 R1/R2[®]

(Home versions of these Operating Systems are not supported by HICAPS)

<http://www.hicaps.com.au/providers/practice-management-system-interface.html>

HICAPSConnect requires [Microsoft .Net Framework v3.5 SP1](#) to be installed on all computers where you require HICAPS Claims or Medicare Easy Claims to be processed. This can be downloaded from Microsoft's website. It is recommended that you obtain the services of your computer technician to install the .Net Framework component.

2.12.2. HICAPS and Terminal Services

- HICAPSConnect does not support a Citrix Terminal Server environment.
 - HICAPSConnect does not support virtualisation.
- Contact HICAPS on 1300 650 852 for further information on their products.

2.13. OPERATING SYSTEM

- The following Microsoft Operating Systems are supported:

- | | |
|--|---|
| - Windows 10 [®] (32/64 Bit) | - Windows Server 2016 [®] (64 Bit) ^ |
| - Windows 8/8.1 [®] (32/64 Bit) * | - Windows Server 2012 [®] R1, R2, Essentials & Foundation (64 Bit) |
| - Windows 7 [®] (32/64 Bit) *# | - Windows Server and SBS 2011 [®] (64 Bit) *# |
| - Windows Vista [®] *# | - Windows Server 2008 R1/R2 [®] (32/64 Bit) *# |
| - Windows XP [®] *# | - Windows Server 2003 [®] *# |

* Version i5 has not been developed for nor tested on these discontinued Operating Systems.

Version i4 has not been developed for nor tested on these discontinued Operating Systems.

Centaur will continue to provide Support to our customers running these discontinued Operating Systems, however we are unable to guarantee a resolution where the Operating System is the root cause of the issue.

^ Refer to "2.13.3 – Compatibility Issues".

- The latest Service Packs must be installed on all supported Operating Systems and any Windows updates may be required when appropriate (now and in the future).

2.13.1. Other Operating Systems

- Examples: Non-Microsoft Operating Systems or Emulated versions of the above Microsoft Operating Systems (e.g. Running Windows 10 within Parallels Desktop under Mac OS X).
- Centaur will continue to provide Support to our customers, however we are unable to guarantee a resolution where the *Centaur Applications* are running on any Operating System other than those listed in 2.13 and that Operating System/Environment is the root cause of the issue.

2.13.2. Expiry of Free Support for Microsoft Operating Systems

Windows Server 2016 [®]	11/01/2022
Windows 10 [®]	13/10/2020
Windows Server 2012 [®] Essentials & Foundation	09/10/2018
Windows Server 2012 [®] R1/R2	09/10/2018
Windows 8/8.1 [®]	Already discontinued*
Windows Server 2003 [®] , 2008 [®] R1/R2 & SBS 2008/2011	Already discontinued*
Windows XP [®] , Vista [®] , 7 [®]	Already discontinued*

*Please see 2.13

For a complete list see: <https://support.microsoft.com/en-au/lifecycle/selectindex>

2.13.3. Compatibility Issues

- Windows Server 2016[®] is only supported on *Centaur Applications i4* build 4146 or higher.
- Not all of our X-Ray link partners have released Windows 10[®] compatible versions of their software and therefore issues may result.

2.14. MICROSOFT OFFICE

- The "Click-To-Run" versions of Office are not supported. There are no plans to support this version.
- 64-bit versions of Word are only compatible with our Word Link module when running *Centaur Applications i4* build 4053 or higher.

2.14.1. Outlook

- The *Centaur Application* PDA Outlook Link is compatible with Outlook 2013/2016.

2.14.2. Word

- The *Centaur Application* Word Link feature is only supported with the following versions of MS Word:
 - Office 365 – Local Install only (Version i4 build 4314 and above)
 - Word 2016
 - Word 2013
- The “Starter” and “Web Apps” editions of Office are not supported.



If the “Word Link” module is used then only those computers with Microsoft Word installed will be able to create/view Letters, Accounts Due, Recall Reminders and Queries.

2.14.3. Older Version of Microsoft Office

- Centaur will continue to provide Support to our customers, however we are unable to guarantee a resolution where an older version of Microsoft Office is installed and that version of Microsoft Office is the root cause of the issue.

2.15. INTERNET UPGRADES

- *Centaur Application* upgrades are provided via our propriety Internet Upgrade (IU) system. This can be set to check automatically and once a new upgrade is found the system can either ignore the upgrade, download the new files only (for a later upgrade) or download and upgrade now. This requires that the Server computer has Internet Access.

2.16. 64-BIT SERVER

- *Centaur Applications* have the option for the Server component to run as 64-bit. This requires the Server computer to be 64-bit compliant with a 64-bit CPU and 64-bit Operating System. To setup the *Centaur Application* Server as 64-bit please contact the Centaur Support dept during standard Support Hours (Mon-Fri 8am-8:30pm).

2.17. OTHER SOFTWARE

- *Centaur Applications* may conflict with other software which also uses the Sybase 12 or Sybase 16 application such as Symantec Norton End Point Security during the install and upgrade of the *Centaur Application*. If this does occur Centaur Support may need to work with your computer IT technician to uninstall the conflicting software and reinstall when complete.

2.18. SERVER DATE/TIME CHANGES

- Changes to the Server computers System Clock (date and time) should only be made when all *Centaur Applications* are closed and the database engine(s) are shutdown.

Any changes to the Servers System Clock while *Centaur Applications* are running may result in system instability or even data corruption.

Changes to the System Clock made by the Operating System, such as Daylight Savings changes, typically occur around 3am when *Centaur Applications* are either shutdown or not in use.

2.19. COMPUTER SYSTEMS

- When purchasing computer systems the variance in pricing and components can be overwhelming. Be assured that you do get what you pay for. Some lower priced systems may be lacking in the following areas:

Proprietary	Only the manufacturer or specified service centre can make repairs or expand the system. This can be more expensive in the longer term.
Expandability	Some systems don't have adequate expansion slots/and or other connection ports for any extra components you may require in the future.
All-in-One	Some “all-in-one” motherboards will not allow you to disable the onboard components. With these motherboards if one onboard component fails you may need to replace the entire motherboard to fix the problem.

Practices should be aware that good computer consultants tend to offer high-end systems. They work on the principle that reliable systems will produce fewer problems, promoting repeat business.

2.20. TABLETS/NETBOOKS

- The base specifications listed on Page 1 are sufficient to run *Centaur Applications*.
- Mobile grade CPU's are not supported or recommended.
- We strongly advise the use of a stylus if you plan on using screens smaller than 13” and want to use the 2D/3D Charting and Perio modules.

2.21. EQUIPMENT REPLACEMENT

All practices should be aware of the “reliable business life” of computer systems. Due to the following factors you can expect between 2.5 – 3 years reliable use of a computer system:

- (a) Component failure (b) Inability to meet future software & Operating System requirements

Network users should consider a structured equipment replacement plan so that costs of computing equipment can be absorbed into the business effectively and maximum tax advantages are achieved.

2.22. WARRANTIES

All practices should understand the implications of any warranties offered and judge them on how they impact the business:

Response Times	Are the response times adequate for your business?
Support Types	Is the warranty on-site or phone support?
System Restoration	<ul style="list-style-type: none"> - Is the warranty only for the replacement of the hardware component? - Will the Windows operating system be reinstalled if the replaced component requires it? - Will your system be reinstalled to its current state (i.e. all business software reinstalled, networked, printers reinstalled and other configuration restored)?
Loaner Systems	Are "loaner systems" on offer if the problem is critical?

Considering the above services you can clearly see that **some** lower-end system providers will not be able to provide these types of guarantees.

2.23. HARDWARE & WINDOWS SUPPORT

All practices at some stage will need the services of an on-site computer technician. Larger users should consider the following services that some computer consultants can provide:

- Maintenance Programs – ensure that your computing environment is maintained before problems arise.
- Block Support – some companies offer the choice of purchasing "block hours" of support (normally cheaper than ad-hoc on-site rates).

2.24. LETTERHEAD/LOGO FILES

The maximum height for a Letterhead/Logo file is 5cm from top of the page (RE: Invoices, Receipts and Treatment Plans). If your printer enforces a margin/padding this will reduce the maximum height of the logo by that amount (e.g. a margin of 5mm means the Letterhead/Logo can be no more than 4.5cm in height). This is a fixed size and cannot be changed.

Accepted Letterhead/Logo File Types: BMP, GIF, JPG.

2.24.1. Pre-Printed Footer

If your pre-printed stationary has a footer section and you want to use a Return Payment Slip on your Invoice, the final page of the Invoice will take up 4.7cm, overriding anything on the stationary. This is a fixed size and cannot be changed.

2.25. TRAINING

Practices should consider some sort of training in the Windows Operating System and the management of related peripherals (e.g. Printers).

Over time your original investment should pay off in the fact that having staff that can solve minor problems will help avoid having to pay on-site technicians. Trained computer users also solve issues faster so it will ensure that your staff will have more time to spend on tasks that are relevant to the practice generating income.

2.26. CUSTOMISED SETUPS

Before attempting a customised setup of a *Centaur Application*, please contact Centaur Support as certain setups are not supported. Centaur Software only supports setups that are supported by the Sybase Platform Certification.

- Sybase does not support accessing a database file via a standard network share (i.e. database on a different physical device than the Sybase engine).

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