audit4
S4S software for specialists

Software 4 Specialists

Audit4 Installation Requirements

Audit4 version 2.46.0+

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Installation Options

Audit4 can be installed to operate in the following ways:

- **Standalone**: Both the Audit4 server and the Audit4 client software are installed on a single computer (i.e. desktop or laptop). A laptop can useful when a single specialist works in a variety of locations that do not have good network connectivity back to a single location – a fully functional Audit4 can be taken from site to site on the laptop.

- **Client / Server**: The Audit4 Database is installed on a windows Server (Microsoft Windows 2000 Server, Windows Server 2003, or Windows Server 2008) and the Audit4 Client software is installed on the PCs within the practice which then access the database(s) on the server. This is the recommended approach. Often remote access solutions can be provided by your IT Support to allow secure Audit4 access from other physical locations across the Internet.

In most cases, **Client / Server** is the best approach. However, it is important that you discuss this carefully with S4S before making a decision on what best suites your needs. If buying new hardware the following is a guide that can help with purchasing decisions. If you have existing hardware then please contact S4S Support to assess the suitability.

Standalone Installation

Single PC or Laptop – Minimum Specifications:

CPU:	2.5+ GHz Single Core or equivalent in Dual/Quad Core
Memory:	2GB (2048MB) RAM minimum (more recommended for Vista/Windows 7)
Hard disk space:	Minimum 20GB free space available. If purchasing new equipment, a 100GB or larger hard drive is recommended. Disk storage capacity requirements for Audit4 media management (scanning and photos) will depend on how heavily this feature is likely to be used. If the drive is partitioned, then the main system drive should have a minimum of 20GB free space before Audit4 is installed.
Display:	1024x768 or better (1280x1024 recommended).
Backup:	To prevent total loss of your critical data from a disaster (e.g. hard drive failure, fire, flood) an off-site backup solution is ***essential***. For example, a weekly off-site DVD backup with a daily backup to another computer or hard drive or USB memory stick would limit data loss to either 1 day or 1 week (worst case scenario).
Operating System:	Windows XP Professional, Windows Vista or Windows 7. Both 32 Bit and 64 Bit versions are supported by Audit4 server and Audit4 client.
Other software:	Internet Explorer 8+. Recent and regularly-updated anti-virus software is highly recommended. The database is hosted by Microsoft SQL Server 2005 Express engine, which is provided free when S4S Support installs Audit4.

Client / Server Installation

Server - Minimum Specifications:

CPU: 2.5GHz+ (Single Core) or equivalent Dual/Quad Core

Memory: 2GB (2048MB) RAM minimum (4GB recommended)

Hard disk space: 20GB free space available. If purchasing new equipment, a 100GB or larger hard drive is recommended. If the drive is partitioned, then the main system drive should have a minimum of 20GB free space before Audit4 is installed. Disk protection using RAID is strongly recommended – talk to your IT supplier.

Display: 1024x768 or greater resolution.

Backup: Off-site backup system (backup tape or external disk - or both).

Operating System: Windows 2003 or 2008 Server. Both 32 bit and 64 bit versions are supported by Audit4.

Other software: Internet Explorer 8+.
Microsoft SQL Server 2005 is recommended for large practices (5 or more terminals). In small and medium sites, S4S will install the free Microsoft SQL Server 2005 Express engine when Audit4 is installed.
Recent and regularly-updated anti-virus software is highly recommended.
If remote Audit4 access is required for multiple users, one option is to purchase additional Terminal Services (i.e. Remote Desktop) licenses – discuss this with your IT provider.

To ensure good performance and availability, it is recommended that the server be a dedicated server and not be used by staff as a workstation. Scanners should only be attached to client computers, not to a server.

Client computers – Minimum Specifications:

CPU: 2.0 GHz+

Memory: 1GB RAM minimum for Windows XP and 2GB minimum for Vista and Windows 7 (3GB+ recommended).

Hard disk space: 20GB available space minimum

Display: 1024x768 minimum (1280x1024+ recommended).

Operating System: Windows XP Pro, Windows Vista or Windows 7. Both 32 bit and 64 bit versions are supported by Audit4.

Other Software: Internet Explorer 8+.
Microsoft Office recommended - but not essential.
Recent and regularly-updated anti-virus software is highly recommended.

Using Existing IT Infrastructure

Before Audit4 is installed onto pre-existing hardware, S4S Support can assess the site's IT infrastructure to confirm suitability. So if your practice already has a network with workstations and servers, or if you already have a laptop (i.e. standalone installation) then please feel free to contact S4S support, or have your IT support contact us on your behalf.

Immediately prior to installation, S4S support staff can conduct a brief health check to ensure there are no pre-existing issues that might impact on Audit4.

Mac Users

Although Audit4 is **not** compatible with any Mac operating system it can however be setup to run in a parallel environment, virtual machine or on an Intel-powered Mac which runs a native Windows installation.

Parallels Desktop allows Mac users to run Windows side-by-side with Mac OS X on any Intel-powered Mac, without rebooting. Audit4 can be setup on any Windows XP Pro virtual machine as long as it meets the above requirements. Other products such as *Boot Camp* also allow Audit4 to be run on Mac hardware. Virtualization using *VMWare* software also allows users to run a Windows operating system for accessing Audit4.

Please advise us if you are considering any of these options.

Network Setup

Audit4 the Client / Server installations will require a correctly functioning TCP/IP Local Area Network.

Correct configuration of Windows folder and share permissions for users may be required to allow media, pathology imports, and patient demographic imports from the practice management system. Audit4 Support services can provide advice and assistance with this, in collaboration with the Practice Manager and/or the practice's general IT Support provider.

Paperless Pathology and Radiology
Electronic pathology results and radiology reports (PIT and/or HL7 format) are downloadable from many pathology and radiology providers. These providers will require their download software to be installed and configured to regularly download results and reports securely via the internet. Changes to firewall and/or proxy configurations may be required to allow the downloading of results. Audit4 can be configured to automatically import result and report files as soon as they are downloaded to the server.

Internet Access

Broadband internet access is required on sites using Audit4 for support and technical assistance. A connection (e.g. ADSL) with bandwidth of 1500/256kbits or greater is recommended.

Printers

Most business class printers are compatible with Audit4. Printers that use **PCL** or **Postscript** printer drivers are recommended. Note that cheaper printers may be **Host Based** or **GDI** only and these can be problematic with some software and have a much higher total cost over the lifetime of the printer.

A printer with two trays is highly recommended for the consulting room – one tray for plain paper and one for HIC script paper.

Scanners

Both flatbed and document feed TWAIN and/or WIA (Windows Image Acquisition) compatible scanners are supported in Audit4. Scanners with an automatic document feeder are highly recommended. Scanning is currently only supported under Windows XP, Server 2003, and windows Vista.

Some recommended scanners:

- Canon DR-2010c
- Kodak I30
- Avision 220
- Fujitsu Fi-5110C

Cameras (photo importing)

Only digital cameras that support WIA (Windows Image Acquisition) can be used ***directly*** with Audit4. Non-WIA cameras can still be used but the photos must be transferred from the camera to the PC and then the resulting files can be imported into Audit4.

Client Support/Firewalls

Audit4 includes a ***client support*** application which uses the ***VNC*** product to facilitate support, troubleshooting, and training of staff remotely over the internet. The client support application needs TCP access to **support.s4s.com.au (203.217.8.99) via port 1594**. Ensuring firewalls allow this TCP port, will allow S4S Support to provide highly effective assistance the moment it is needed.

For sites with a dedicated server machine, S4S requires remote access, preferably via a Windows Remote Desktop Connection (remote control software such as *LogMeIn* or *GoToMyPC* are alternative solutions). Configuration of a VPN connection to the network is also recommended as an extra layer of security. In addition to this, an account on the server machine with administrative privileges is required for installation, upgrades and ongoing support and management of the Audit4 Database and associated software (i.e. pathology download software).

For Audit4 database and software updates, **HTTP (TCP port 80)** access to update.s4s.com.au is needed. This is rarely an issue, but some firewalls or password-protected internet connections may require minor configuration changes to facilitate the required access.

Local desktop firewalls may, by default, prevent Audit4 from running correctly. The firewall may need a simple configuration change to allow the Audit4 program to communicate with the Audit4 Database.

Remote Access

The Remote Site scenario arises where there is a need to access the Audit4 system from a different physical premises to that where the Audit4 database resides. Examples of this scenario might include doctors wishing to access Audit4 from a Regional Surgery or Home Office.

In addition to the Server and Client System Requirements, the Remote Site Scenario can be achieved with the following technologies in place:

1. **Virtual Private Network (VPN)**
   A VPN facilitates the secure connection of two or more physical premises using relatively inexpensive broadband internet connections. In order to establish a VPN you will typically require:
   - A Broadband Internet connection for each site
     (1500/256 Kbps, Static IP Address recommended)
   - A Broadband VPN Router/Firewall for each site
     (e.g Cisco 877 Integrated Services Router or Nortel VPN Router 600)

2. **Remote Access Software**
   Remote Access Software is required to use Audit4 from the Internet. Microsoft provides the Remote Desktop Connection (i.e. Terminal Services) software in all current versions of Windows. If it is likely that more than two users will be accessing a Windows 2003 server at any one time, then you can purchase additional Terminal Services licenses from Microsoft – speak to your general IT support provider.

Other remote access solutions include the *GoToMyPc* software solution. It enables secure remote access to 1-20 machines from an Internet Web browser. *LogMeIn* is another product which provides a similar service.

Whilst the Remote Sites scenario may require the addition of the VPN and/or Remote Control software, the performance of Audit4 is only slightly degraded. On each Remote Computer an icon can be created that allows the doctor to login to their computer back at their practice (or to login to a server or a terminal server) to run Audit4.

Printing from a remote site on a local printer can be configured within Windows Remote Desktop or Terminal Services and functions seamlessly in Audit4, provided the printer driver supports the Remote Desktop Protocol (RDP). Most PCL and Postscript printers support the Windows RDP and work seamlessly.

Backing Up Your Data

Regular backup of the Audit4 databases is crucial for minimising data loss in the event of hardware or software failure. S4S Support will configure regular SQL Backups (ie database exports to backup files) so that your sites normal backup software can copy the data in a format that can be used in the event of a disaster. **Copying of these Audit4 backup files to removable backup media (e.g. backup tapes or removable drives) and safe off-site storage of your backup media is also necessary and is the responsibility of the practice.** The site should also consider their process for backing up other practice data, such as the Practice Management System (if appropriate), email archives and system restore data and any other data files that are stored on the server. **Ensure your general IT Support has an effective backup solution AND process in place for all your critical data including the Audit4 "backup" files.**

There are a few options for backing up the data:

1. **Tape backup**. Backup tapes can hold a large amount of data and are relatively inexpensive allowing the purchase of many tapes to be used in a weekly cycle with some tapes retained for longer periods. Tapes are small and thus easy to take and store off-site.

2. **Removable Backup Hard Disk Drives** may be used to store Audit4 Backup files. It is recommended that more than one drive be used (and cycled) in order to maintain off-site copies of the databases and media archives. Ideally there should be enough capacity and also a solution in place that allows for retaining multiple backups (not just the latest).

3. **DVD backup**. For smaller, standalone systems, a DVD burner may suffice to backup the Audit4 database and associated media.

4. **Online backup**. There are commercial service providers that provide network-based backup services – these are also considered suitable for Audit4 if their configuration is appropriate. These can be done in addition to the other options above.

Whatever backup technology is used, it is critical that a process is in place to regularly confirm that the backups are working properly.

Installation and Support

S4S Support will perform the installation of the Audit4 Database engine, Audit4 database, and Audit4 client on client workstations. This will be done using the remote access solution provided by your IT Support provider. Post installation, S4S Support will provide an ongoing Application Management service and thus requires ongoing remote access either by VNC (local staff must initiate this), Remote Desktop Connection and VPN, or secure web services such as *Logmein*.

Contacts

It is best that S4S Support staff discuss the site's IT Infrastructure with the on-site IT/hardware/network support staff or IT support provider. Please forward their contact details as early as possible prior to the Audit4 installation.

S4S Support can be contacted on 1300 133 308
Email: mailto:support@s4s.com.au