



**S4S Pty Ltd**  
ABN: 26 104 845 909  
**Phone:** 1300 133 308  
**Web:** <http://www.s4s.com.au>

---

## **Audit4 Installation Requirements**

Audit4 version 11+

2017

The following table provides details on the operating system and database engine support for Audit4 as at March 2015.

Operating System	Audit4 Client	Audit4 Server	Notes
Windows Server 2016	✓	✓	Includes support for Remote Desktop Services
Windows Server 2012 & 2012 R2	✓	✓	Includes support for Remote Desktop Services
Windows Server 2008 R2	✓	✓	Includes support for Remote Desktop Services
Microsoft Small Business Server (SBS)	?	?	SBS Editions are NOT recommended due to excessive resource usage by SBS features. Ring S4S Support to discuss.
Windows 7 Windows 8 / 8.1 Windows 10	✓	✓	Home editions of Windows 7 are NOT recommended; Professional or Ultimate are best. Only 64 bit versions are supported.
Windows XP and Windows Server 2003/2008 Windows Vista	✗	✗	NOT supported for new installations due to Microsoft's end of support policies.
Database Engine			
MS SQL 2016, 2014 & 2008 R2 Express Edition (free).	✓	✓	For sites where the number of concurrent users is typically < 9, S4S can install the express edition of MS-SQL 2016 (or 2008 R2 or 2014) free of charge when installing Audit4 server.
MS SQL 2016, 2014, 2012 or 2008 R2 Standard Edition	✓	✓	Recommended for larger sites (e.g. Hospitals) where there are often more than 6 concurrent active users or database exceeds 10GB. <b>(Requires purchase of licenses from Microsoft).</b>
Internet Explorer			
Version 9,10 and 11	✓	n/a	Internet Explorer 11 is strongly recommended. (Early versions are no longer supported – some features will not work fully).

## Audit4 Accounts Requirements

Software for Specialists are currently developing an Accounts module with an anticipated release in Q4 2017. This will require Microsoft SQL 2016, which in turn requires Windows Server 2012 R2 or Windows Server 2016 or Windows 10.

## Installation Options

Audit4 can be installed to operate in the following ways:

<b>1</b>	<b>Standalone (e.g. Laptop)</b>
	<p>The Audit4 server and the Audit4 client software are both installed on a single computer (i.e. desktop but typically a laptop). A laptop can be useful when a single practitioner works in a variety of locations that do not have an Internet connection – a fully functional Audit4 can be taken from site to site on the laptop. However, other staff (e.g. Typists and Receptionists) will not necessarily be able to access your Audit4 though, hence this is rarely a good solution.</p>
<b>2</b>	<b>Client / Server</b>
	<p>The Audit4 Database software is installed on a Microsoft Windows Server and the Audit4 Client software is installed on the PCs within the practice which then access the database on the server. This is the recommended approach. Remote access solutions can be configured by your IT Support to allow secure access to your Audit4 database from other locations across the Internet.</p>
<b>3</b>	<b>Internet Hosted</b>
	<p>Rather than purchase your own server, it is possible to pay for a hosted service. An internet hosting service provider would create a dedicated server for you within their data centre. You would pay an annual or a monthly fee. They look after the server hardware and operating system, and they pay the Microsoft Software licensing, plus all the power and internet costs. S4S Support are provided with a login to install and provide the standard ongoing database management service for the Audit4 database.</p> <p>All Audit4 users login via a secure Remote Desktop connection – which can work very well, even over a mobile Next G connection. Multiple users (Drs, Admin and Nurses) can all login simultaneously from any Internet connected PC or Mac<sup>1</sup>.</p> <p>If a hosted solution is being considered, contact S4S support. We can put you in touch with some Internet Hosted providers that other Audit4 users have engaged that have provided an excellent service.</p>

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 suits your needs.

If buying new hardware the following is a rough guide that can help with purchasing decisions. If you have existing hardware then please contact S4S Support to assess the suitability.

<sup>1</sup> It is possible to use Remote Desktop from a Mac to a Windows Remote Desktop Server. This can work well but some printers and scanners may not work properly. Talk to S4S Support for more details on Apple Mac Remote Desktop.

## 1. Standalone Installation - PC / Laptop Purchasing Guide

<b>CPU</b>	Min 2.5+ GHz 64 bit multi-core
<b>Memory</b>	4GB of RAM minimum for Windows 7, 8, 10. More is recommended.
<b>Hard disk space</b>	Minimum 30GB free space available on the system partition prior to the Audit4 installation. When purchasing new equipment, a 200GB 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.
<b>Display</b>	1280x768 minimum resolution (1280x1024 or higher is recommended).
<b>Backup</b>	<p>To prevent total loss of your critical data from a disaster (e.g. hard drive failure, fire, flood) an off-site backup solution is <b>essential</b>.</p> <p>For example, a daily USB Hard drive backup involving multiple hard drives (or even USB memory sticks) taken and stored off-site can limit Audit4 data loss to 1 day. Backup Software or manual copy solutions are both acceptable.</p>
<b>Operating System</b>	Windows 7, 8, 8.1, 10 Professional or better.
<b>Other software</b>	Internet Explorer 11. A recent version of anti-malware software that is regularly updated is highly recommended. The database is hosted by Microsoft SQL Server 2014 Express engine, which is installed at no additional cost when S4S Support installs Audit4.

## 2. Client / Server Installation – Server Purchasing Guide

<b>CPU</b>	2.5 GHz+ 64 bit Multi-Core minimum
<b>Memory</b>	4GB RAM minimum depending on which server operating system being used. 8GB+ recommended.
<b>Hard disk space</b>	Minimum of 30GB free space available on system partition before Audit4 is installed. When purchasing new equipment, a 250GB or larger hard drive is recommended. Disk protection using RAID is strongly recommended – talk to your IT supplier.
<b>Display</b>	1280x768 or greater resolution.
<b>Backup</b>	Off-site backup system (backup tape or external disk - or both).
<b>Operating System</b>	Windows Server 2008 R2, 2012 or 2012 R2 <sup>2</sup> .
<b>Other software</b>	<p>Internet Explorer 11</p> <p>Microsoft SQL Server 2016 Standard is recommended for large practices where more than 8 concurrent users are commonly expected. In small and medium sites, S4S support will install at no additional cost, SQL Server 2014 <b>Express</b> for the Audit4 to use.</p> <p>Anti-malware software is highly recommended.</p> <p>If remote access to your Audit4 database will be required, consider the purchase of Remote Desktop Services licenses – discuss this and other remote access options with your IT provider and S4S Support.</p>

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. It is recommended that scanners should only be attached to client computers, not directly attached to the server.

## 2. Client / Server Installation – PC Client Purchasing Guide

<b>NOTE</b>	When Audit4 server is installed on a separate server, then the client workstations can be lower powered windows PCs, but purchasing more powerful PCs will improve overall performance.
<b>CPU</b>	2.5 GHz+ (64 bit multi-core recommended)
<b>Memory</b>	4GB for Windows 7, 8, 8.1, 10 (6GB+ recommended).
<b>Hard disk space</b>	10GB available disk space before Audit4 Client program is installed.
<b>Display</b>	1280x768 minimum resolution (1280x1024 or higher is recommended).
<b>Operating System</b>	Windows 7, 8, 8.1, 10 Professional or better.
<b>Other software</b>	Internet Explorer 11. Anti-malware software that is regularly updated.

<sup>2</sup> Windows 7, 8, 8.1, 10 can be used as a server for Audit4, but Windows Server Editions have numerous advantages that are not Audit4 related – talk to your IT Support.

## Printers

Business class printers are typically compatible with Audit4. Printers that use **PCL** or **Postscript** printer drivers are recommended and should have no problems with Audit4; if they work within Windows they should be fine for Audit4. Note that cheaper printers may be **Host Based** or **GDI** only and these can be problematic with some software products (including Audit4) and usually 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. Ring S4S support if unsure about a model you intend to purchase. Fujitsu, Canon, and Kodak all have good compact document feeder models that provide TWAIN drivers.

## 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.

## Using Existing IT Infrastructure

Before Audit4 is installed onto existing computers, S4S Support can assess their 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 health check to ensure there are no pre-existing issues that might impact on Audit4.

## Network Setup

Audit4 Client / Server installations will require a correctly functioning TCP/IP Local Area Network. A cabled (Cat 5 or better) local area network is recommended but wireless local networks can be acceptable depending on the environment, the configuration and the number of wireless devices.

### **Electronic Pathology Results and Radiology Reports**

Electronic results and reports (PIT or HL7 formatted files) 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. S4S Support will configure Audit4 to automatically import result and report files as that are downloaded on 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.

## Network Firewalls and Support Services

Audit4 includes a **client support** application 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. *LogMeIn Rescue* and *Teamviewer Quicksupport* on **port 443** is an alternative solution that can be used if required.

For sites with a dedicated server, S4S requires remote access, preferably via a Windows Remote Desktop Connection or secure remote control software such as *LogMeIn* or *TeamViewer*. 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). A typical Audit4 installation does not require a server restart.

For Audit4 database and software updates, **HTTP (TCP port 80)** access to [update.s4s.com.au](http://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 and/or server firewalls may, by default, prevent Audit4 from running correctly. The firewall may need a simple configuration changes (additional rules) to allow the Audit4 program to communicate with the Audit4 Database and Audit4 Media Web Service.

## Remote Access

The Remote Site scenario arises where there is a need to access the Audit4 system from another location (e.g. secondary consulting rooms, 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 is a method to facilitate the secure inter-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)

In many cases a VPN is not essential and Remote Desktop Services by themselves may suffice.

### 2. Remote Access Software

Remote Access Software is required to use Audit4 across the Internet. Microsoft provides the Remote Desktop Connection (aka. Terminal Services) software in most versions of Windows, therefore one option is to use Remote Desktop connections to the computer in your rooms. Another option, if you have a Windows server, is to purchase Remote Desktop Services licenses (aka Terminal Services) from Microsoft – your IT Support should be able to advise and assist. Other cost effective solutions are available and can be discussed with S4S Support and/or your IT Support.

Other secure remote access solutions include the *GoToMyPc* and *Logmein*.

## Remote Printing

When considering a remote access solution, ensure that your printing needs at the remote site are taken into account; some solutions may not meet your needs. Your IT Support and/or S4S Support can provide advice.

## 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 to ensure this can be provided efficiently, ongoing remote access is requested (e.g. Remote Desktop Connection, or secure web services such as *Logmein*).



## 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 (i.e. database exports to backup files) so that your sites normal backup software can easily copy the data in an easy to restore 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 a number of 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 several drives be used (and cycled) in order to maintain off-site copies of the databases and media archives. Ideally there should be enough capacity and the solution should allow for retention of multiple backups (i.e. not just the latest).
3. **Manual use of a USB Memory stick** is also a valid secondary option to store Audit4 Backup files. It is recommended that several memory sticks be used (and cycled) in order to maintain off-site copies of the databases and media archives. However, it is unlikely that a memory stick's capacity would be sufficient for more than just the Audit4 files, but it remains a good secondary solution in case the primary backup solution fails.
4. **Online/Cloud based backups.** 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. You are encouraged to contact S4S to confirm the validity of your backups or for assistance with how you can perform secondary manual backups.**

## 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>