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# Recommended hardware for Socrate 4 Windows (S4w)

## Hardware requirements

### Desktop computer

S4w (Socrate 4 Windows) can be run on a PC with the following **minimum** requirements:

- ✓ CPU power: PII 350 or PIV or more (single or dual core or X cores)
- ✓ **1 GB** or more under Windows 2000 Pro
- ✓ 1 GB or more under Windows XP
- ✓ 2 GB or more under Windows Vista
- ✓ 2 or 4 GB or more under Windows 7
- ✓ 4 GB under Windows 8?

- ✓ Colour VDO Card –> with a minimum resolution of 800*600 and 256 colours
- ✓ 15" to xx" LCD monitor.
- ✓ Minimum resolution: **800*600**, no matter what type of monitor, 1024*768 or more is recommended …

- ✓ Hard disk drive 300 GB or more

- ✓ Windows NT 4: very stable but out of date
- ✓ Windows 2000: very stable in SP4 but out of date
- ✓ Windows XP, preferably in PRO version SP x
- ✓ Windows XP Home version is possible *but there is no domain management)*
- ✓ Windows Vista, but our preference goes to Windows 7
- ✓ **Windows 7** (Pro if you are running Windows server and active directory with domain)

- ✓ A 'good quality' mouse – wireless and optical would be the best choice

- ✓ A laser printer is economical – e.g. Brother – but inkjet printers are also possible. However, take care that inkjet printers are set to a minimum definition of 720 dpi for barcode printing. Also, inkjet printer ink may deteriorate over time due to the negative impact of UV radiation.

- ✓ A barcode reader is highly useful and to be configured for EAN 39 extended code – we can supply this material!

*Do take note that S4w can also be run on a Pentium I PC with 32 MB memory and a HDD of 500 MB, but it would be slow, unstable and unfit for intensive use or full-text indexed searching.*

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## Socrate on a notebook

All modern notebooks have the necessary power to "run" Socrate 4 Windows.

**However, do mind the following aspects:**

- Windows **XP** Home or PRO or Windows 7 should be supplied and installed on the notebook
- The Windows version should be available in your working language
- Windows XP PRO or Windows 7 are recommended if the notebook is to be networked with Windows 2000 or 2003 or 2008 or 2012 Server.
- A main storage capacity of **2 to 4 GB** or more is recommended
- A hard disk drive of > **300 GB** or more is recommended
- A DVD – CD **writer** is useful
- A **15" or 17"** LCD screen
- 2 years guarantee or more
- 3 to 4 **USB** ports (2.0 or 3.0), preferably horizontally aligned and not on top of one another.
- A parallel printer port may be useful but rare
- An external VGA or DVI or HDMI connector is useful to connect an external monitor.
- A PS2 connector is useful to connect a keyboard or mouse.
- The barcode reader must be connected to the **USB port**. We can supply this type of **barcode readers**. (See beneath)
- An Ethernet **network card** 10/100 MB/s or 1 GB/s
- A wireless network card is often present but not really necessary
- The notebook **backup** should take place either by regularly connecting the notebook to its server, or by using USB memory keys of at least 2 GB.
- We recommend and sell the following brands, in order of preference: **Asus / Acer / MSI / Medion**

## Backup system on the notebook, stand-alone computer or small network

USB memory keys are useful and very easy to exchange data between library deposit centres deprived of internet connection.

For the sake of the back-up, create a set of 7 or 14 USB memory keys (2 GB or more) to organize a backup 'round' over 7 or 14 days. **Do not keep** the keys in the same place as the notebook in order to avoid it all being stolen.

**Server:**

Up to 4 networked PCs, a powerful, state-of-the-art and fast PC under Windows XP (SPx) or Windows 7 will do the job as a non-dedicated pseudo-server.

As from 5 networked PCs, a **dedicated server** is required – such as Windows Server 2003 - 2008 or Linux Server with Samba network (Redhat)

*– Note that a Terminal Server solution is not possible under Linux!*

**A new, fast, simple and cheap solution comes in the form of small compact servers called: NAS or SAN. We propose and configure Synology servers, these servers are particularly fast and highly secure.**

- *Take note that a Terminal Server solution is not possible under NAS or SAN !*

**Internal description of the perfect server:**

A server should meet the following needs:

- ✓ Be simple, stable and reliable.
- ✓
- ✓ A well ventilated, **big case** with lateral doors for easy access
- ✓ A regulated power supply of at least **650 W** with heat ventilation
- ✓ A protection cover on the start and reset buttons
- ✓
- ✓ A simple and easy to configure motherboard (Asus)
- ✓ Maybe a second motherboard to keep in reserve...
- ✓
- ✓ A state of the art Intel CPU (I5 or I7) – x core
- ✓ Minimum memory 4 GB or more in 64 bit and/or Terminal Server
- ✓ Considering the price of memory, 32 GB of memory would give ease of mind
- ✓ In Terminal Server Socrate 4 Windows takes 64 Mb per session
- ✓
- ✓ Two fast SATA or SAS hard disks (600 MB/s or more)
- ✓ SSD disks are also very fast but more expensive and their writing speed may be longer
- ✓ Motherboard with Sata controller (300 or better 600 MB/s) or SAS controller
- ✓ 2 Hard disks (2 x 1 Tera) configured for OS mirroring or hardware Raid. Hard disk partitioned in C: ( 25%) for the system, D: (25%) for the local software and a partition S: (50%) or T: for the data to be
- ✓ shared on the network from the partition root.
- ✓
- ✓ It is a good idea to have a low-cost SATA hard disk to take Xcopy's at nigh (fast and simple reload). Note that this disk must be connected to an other Sata port than the fast disks!
- ✓
- ✓ A 1GB/s network card of the same brand as the PCs in the network.
- ✓ 2 Ethernet cards would be interesting – to easily separate LAN and WAN
- ✓
- ✓ A DVD reader
- ✓ A back-up system based on NAS or SAN or following the local IT strategy
- ✓ Some 20 DAT tapes to organize backup rounds over 14 days or NAS
- ✓ USB ports 2.0 and 3.0
- ✓ A sound card is not useful but not disturbing either.
- ✓ 15" monitor + wired keyboard + mouse

**Network:**

In order to keep up the normal speed…

**a UTP category 5 network of 100 MB/s or 1 GB/s with switch is required**.

Switches (10/100/1 GB per second) of the same brand as the network cards of the PCs

*Please take note that antenna-based IT networks are not yet fast enough and are not at all recommended except in Terminal Server mode on Windows 2000 or 2003 Server, configured by your hardware vendor.*

**General remark**

Purchasing hardware from an other supplier than our company is **no problem whatsoever** and in no way raises the price settings for our library management software. We do ask that the vendor respects our recommendations as to the technical specifications and fully **installs and configures the hardware, software and operating systems he has been asked to supply or integrate.**