



IT Administration Guide

Pre-Installation Guide for IT / DBA personnel

Note: all information below refers to a new install of IceSpy System5 version 5.50 (or later) not to earlier versions.

1. Minimum PC Specifications*

| | IceSpy Server | IceSpy Clients |
|-------------------------|--|---|
| RAM | 1GB | 512MB |
| Processor speed | 2GHz or faster is recommended | 1GHz or faster |
| Hard Disk Space | 2GB for programme Plus further space for data growth, as per below. | 1 GB |
| Rate of Growth | The database will grow at 32Kb per sensor per day, or 1MB per sensor per month, so a 100-sensor system will grow to 1GB in 9-10 months. Also, allow space for database backups, preferably on a different PC or removable storage. The backup process requires the same space again on the server, and backups should be preferably made on a different PC or removable storage. Further space will be required to view archived databases at the same time as the current database. | N/a |
| Operating System | Windows 2000 (SP1+), XP Pro (SP1+), Server 2003/2008. <i>Please note that NT4.0 is not supported by System5.</i> 'Vista' (Business or Ultimate) | Windows 2000 (SP1+), XP Home, XP Pro (SP1+), Server 2003/2008, Server 2008, Vista |
| Monitor | 1024 x 728 resolution or higher | |
| Connection | Ethernet and/or USB (1.1 or higher) and/or RS232 serial port (see below) | N/a |

2. Elements of the Software Installation

The initial System5 software installation involves 3 components; a database engine, Microsoft libraries and finally the IceSpy suite of applications. The Microsoft .NET libraries may already be installed on your systems but will be installed from the IceSpy CD as required. The components installed depend on the version of IceSpy System5 being used:

| | Version 5.50 and later |
|---|---|
| Database engine (default) | SQL2005 Express |
| Database engine (option) | SQL2000**, SQL2005** or SQL2008** |
| Database location (default) | Same logical machine as System5 server (i.e. installation machine) |
| Database location (option) | Anywhere on network, but note there will be continuous network traffic between IceSpy server and DB server. |
| Database instance name (default) | 'System5' or 'System5ES' (for 'Extra Secure' installs) |
| Database instance name (option) | Any existing (or new) instance, except for Extra-Secure version** which must be 'System5ES' |
| Microsoft .NET | .NET 2.0 |

* Based on a dedicated PC with typical services and no other applications running.

** SQL2005Express (installed by default), is provided free with System5. Options to use other versions of SQL depend on users purchasing separate licences from Microsoft.

*** 'Extra-Secure' version of System5 is a purchase option that has tighter security and access control. Installation of Extra-Secure version database instance ('System5ES') removes standard Windows admin rights for DB access so will not be accessible via third-party SQL tools.

For installation of the software, full administrative rights must be used. In normal operation, post setup, a user should not require administrative rights, however for systems enforcing strict control via Group Policies we have found the most effective method is to create a Group of users and assign them read/write permissions over the following items:

C:\Program Files\Silvertree Engineering\IceSpy System5
 (registry) HKEY_CURRENT_USER\Software\Silvertree Engineering
 (registry) HKEY_LOCAL_MACHINE\Software\Silvertree Engineering

3. Other notes on software components

Apart from the database, System5 will install two Windows services on the System5 server. There are also various applications to view and adjust the collected data. Client machines will not have any Windows services installed, and only a subset of the applications. Access to applications can be specified to different user levels, using either Windows login authorisation or SQL authorisation.

SQL2005Express will support a database of up to 1GB happily, after this time system performance may slow. Because of this, a warning will appear informing the current user that the D/B size has reached 1GB and that they should back up the data and compress the database. If using a full version of SQL2000 or SQL2005, this warning can be suppressed via a Windows registry change.

Backup tools are provided; by default a backup reminder is displayed every 7days.

4. Elements of the Hardware

Connections from System5 hardware to PCs or network infrastructure will be via 'Base' (or 'BasePlus') units and/or 'Bridge' units. Base/BasePlus have connection options, depending on hardware purchased, as noted below:

| | USB | RS232 | Ethernet (10Mb/s, HDX) | Modem (PSTN or GSM) |
|-----------------------------|--------|--------|--|------------------------|
| Base / BasePlus* | Option | Option | Option (preferred option for large systems; more notes below) | Option |
| Bridge | Yes | No | No (although third-party Ethernet/USB converters can be used) | No |

*A BasePlus has the same connectivity as a Base; the difference is that it has a user interface. This interface does however allow easier interrogation of some parameters, including IP address.

You may also come across 'Echo' units; these are in essence repeaters for radio signals from the sensors to the Base collection units. It simply requires mains power and has no physical connection to other hardware.

5. USB connection

The USB and RS232 connections share a communications card and Base/BasePlus units can have their power supplied solely via USB, although we recommend using mains power if available. The USB interface works via a USB/Serial converter and must be assigned a Com port. Up to date USB drivers will be in the root of the accompanying CDROM in the USB directory. Do not use the default Microsoft USB driver, always search for the driver on the System5 installation CD.

Bridges are USB-powered only, so the PC they are connected to must be left switched on to collect data.

6. Ethernet connection

The onboard NIC, although only 10MB/sec half duplex, will deal with data transfers capably. If your network does not support this lower speed a small conversion hub may be necessary. (A low speed was chosen to achieve best possible RF reception which can be affected by fast processors). Typical network traffic from a Base unit with a full complement of 64 sensors, after an initial start-up phase, is less than 10kB per minute.

We can provide you with a MAC address a few days prior to shipping to enable you to create a DHCP reservation, alternatively the unit will acquire an IP address via any available DHCP servers. Functionality exists within the accompanying tools to specify a static IP address of your choice. (By default a NIC will revert to 192.168.1.112 should no DHCP server be available).

Base units will send occasional UDP broadcasts so if on the same subnet as the System5 server will be found automatically. If on other subnets the IP address and serial number of each Base will need entering manually via the System5 'LoggerTools' dialog provided in the applications.

7. Backing up IceSpy

The IceSpy suite of tools includes both a manual and automatic back up facility. The manual backup is initiated from the 'Manage Database' feature.

The automatic backup is created by adding a Scheduled Task and pointing it to 'C:\Program Files\Silvertree Engineering\IceSpy System5\sys5.autobackup.exe'. The frequency of the scheduled task can be amended to run daily, weekly or monthly; the destination disk/directory can also be specified. Note that when backing up to a remote location, authentication should be validated for the credentials intended for use and that should the user alter their password the scheduled task will also require the new password to be entered. The Auto Backup feature will automatically append a daily, weekly or monthly time stamp to the outputted file name, e.g. 27/11/2007.IS5, Week48.IS5 or 11/2007.IS5. The file will be overwritten as frequently as is required until the next timestamp becomes valid e.g. from Sunday to Sunday for the 'w' switch the file will be overwritten, but on Monday a new file of Week49.IS5 would be created.

Either manual or auto backup routine will output an '.IS5' file which is in standard SQL backup format. This can be used to restore all settings including usernames, access levels, alarm settings etc, to a new or existing installation of the software.

Alternatively, existing SQL backup tools can be used.

8. Wireless Security

IceSpy System5 uses a proprietary radio protocol at 430MHz (not 'Bluetooth', 'Wi-Fi', DECT or cellular) and does not allow any connection from existing wireless networks.

WiFi uses protocols and radio frequencies defined in IEEE 802.11. These frequency bands are 2.4GHz and above, much higher than the 433Mhz used for IceSpy. There is no possibility of IceSpy interfering with WiFi or (assuming it is designed according to international standards) WiFi affecting IceSpy with radio interference. IceSpy has been rigorously tested to the European R&TTE Directive and has a very narrow frequency band.

Also see supporting document "System5 Network Security Statement – MSC114.10".