
LanSchool® 7.2

Classroom Management Software Installation Guide

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About LanSchool v7.2

Thank you for purchasing LanSchool v7.2. LanSchool v7.2 is an award winning software program designed to help teachers improve the learning environment in a computer-based classroom.

With LanSchool installed on each computer in a classroom, a teacher has the ability to:

Reduce Student Distractions

A teacher can reduce student distractions by Blanking Screens, Limiting Applications, Limiting Web Browsing, Limiting USB drives or Disabling Printing on student computers. This helps direct student attention from their computer to the teacher and keeps students on task.

Demonstrate Skills

With the Show Teacher feature, students can watch what's happening at the teacher's computer, right from their own monitor. This is ideal for presentations and showing students how to use computer applications.

Monitor Students

Ideal for monitoring student activity within a classroom setting, the Thumbnail feature allows you to view all or any particular student's screen as well as quickly see at a glance the current application and website that the students are running.

Assess Student Understanding

Students can be quickly polled during a lecture or given a longer quiz or test.

Help Individual Students

Students can silently Request Help from the teacher. A small question mark appears by their login name which indicates they need help. At that point you can Chat with the student or Remotely Control their machine to help them with their question.

Supported Environments

LanSchool v7.2 works with any combination of the following operating systems and thin client devices:

Windows* 98, Windows ME, Windows 2000, Windows XP-32, Windows Vista-32, Windows 2003 Terminal Server, Citrix, NComputing, Mac OS 10.4 and 10.5.

The only exception is the LanSchool Teacher console will not run on Mac operating systems unless you are running Windows through Parallels or VMWare. A Mac console will be available Mid 2009.

Listed below are the minimum requirements necessary to run LanSchool on both the teacher and student computers.

Processor

PCs: 166 MHz Intel® Pentium® processor or faster

Macs: 700 MHz PowerPC G4, G5 or faster, Any Intel-based Mac

RAM

- 48 MB for Windows 98
- 96 MB for Windows 2000
- 128 MB for Windows XP
- 256 MB for Windows Vista
- 512 MB for Mac OS 10

Protocol stack

All computers running LanSchool must be configured with TCP/IP running static or dynamic IP addresses. 802.11 wireless is supported, however enterprise class access points are recommended.

Technical Support

3 years of free technical support is included as part of the LanSchool product. You have three options for getting support:

World Wide Web

For the latest information about LanSchool, as well as FAQs, white papers, and much more, visit the Web site at <http://www.lanschool.com>.

E-mail

Send your questions via e-mail to support@lanschool.com.

Phone

Call Toll-Free (877) 370-5546 during business hours (U.S. Mountain Time).

Our technical support policy is one of the best in the industry. If we cannot find and fix a LanSchool problem with a few phone calls, e-mails or remote debug sessions, we will fly a technician anywhere in North America (at our expense) to resolve the issue. This “on-site” support is even offered on the 30-day-demo version of the software. We stand behind the quality of our software!

Getting Started

Your LanSchool v7.2 product download includes the executable files needed to install the LanSchool application, as well as electronic copies of this LanSchool 7.2 Installation Guide (**INSTALL.PDF**) and the LanSchool 7.2 User's Guide (**USERS.PDF**).

Both guides are in Adobe Acrobat* .PDF file format and require Acrobat Reader* to view or print from. Acrobat Reader is available on your LanSchool download in the Acrobat folder, or free off of the Adobe Web site at <http://www.adobe.com>.

How LanSchool Works

LanSchool works by enabling a teacher to control all student computers within a computer-based classroom.

It uses teacher “channels” to ensure that all the computers in that classroom see the same computer screen; much like a TV channel enables different TVs to see the same program. LanSchool has 16,000 teacher channels from which to choose, which means that you can have as many as 16,000 different classrooms using LanSchool at any given time.

The most logical way to set up LanSchool is for each classroom or room to have its own teacher channel, as well as just one teacher computer. This setup enables all of the computers in the same classroom to interact with each other and one teacher to control the entire room.

However, there is now a special version of LanSchool which will support One-to-One schools. (These are schools which have a personal laptop computer for every student and teacher.) When the One-to-One version of LanSchool is installed the students have the ability to join or leave a channel.

The teacher can monitor students as they join and/or leave the class. The teacher can also compare the current list of students in the class against a previously saved student list. This makes it easy to see who is absent or who has joined the class but really should not be there.

Installing LanSchool v7.2

Before installing LanSchool v7.2, review the following requirements and ensure your network and lab computers are running smoothly. Doing so will prevent problems during installation.

Plan the Installation

By taking a few minutes to plan out your installation, you should be able to install LanSchool on each computer in two minutes or less. Consider these issues before beginning installation:

- **Choose between a normal lab setup or the 1:1 setup**

If you are running LanSchool in a “one-to-one” environment, where each student has their own computing device, instead of running the SETUP.EXE file, run the Setup_One2One.exe file found in the One2One folder of the LanSchool download.

Note: If you don't want student keystrokes to be recorded, run Setup_One2One_NoKbdMon.exe.

- **Choose a unique teacher channel for each lab (normal lab setup)**

LanSchool is designed to work with as many as 16,000 different training labs on the same network. It uses **teacher channels** to broadcast the contents of a teacher's computer to student computers on the same channel. To simplify installation, **each lab should have its own unique channel**, as well as just one teacher computer.

Think of a teacher channel as a TV channel: All TVs tuned to a certain channel receive the same program. In the same way, all students configured to a certain teacher channel receive the screen broadcasts from the teacher configured to that same channel. If only one LanSchool lab is on your network, you can choose any number from 1 to 16,000. If you have multiple LanSchool labs, each requires its own unique teacher channel number.

Note: If you don't want student keystrokes to be recorded, run Setup_NoKbdMon.exe.

- **For each lab, decide which computer will be the teacher computer**

Generally, you want to set up one teacher computer per lab. The teacher will use this computer to control all student computers in the same lab. During installation, you'll have to specify if the computer is a “teacher” or “student” computer.

- **Configure a valid TCP/IP protocol stack for all student and teacher computers**

If the computers are using DHCP, then DHCP must be working properly. It's best if the teacher and student computers are all on the same IP subnet.

- **Use good networking hardware and software**

If your computer lab already experiences network errors, LanSchool will only make things worse. If you are experiencing problems logging onto computers or copying files over the network, fix these issues before installing LanSchool.

- **Use an enterprise class access point**

If you plan on using LanSchool v7.2 over a wireless network, it is important to use an enterprise class access point. Generally, personal home network wireless access points that cost less than \$100 are not robust enough to handle many connections. We recommend an access point in the \$200-\$300 range that will reliably handle the student connections.

- **Determine whether or not you want students to access the LanSchool icon**

If you do not want students to access the LanSchool icon, run Setup_Stealth.exe.

- **Determine whether you want to run LanSchool in Secure Mode**

Running LanSchool v7.2 in Secure Mode requires a teacher to type in a password in order to see students on a particular channel. For instructions on how to install LanSchool v7.2 in Secure Mode, refer to the section, Installing LanSchool v7.2 in Secure Mode later in this manual.

- **Determine if it is necessary to install on Terminal Services, Citrix or NComputing environments**

LanSchool will run in a thin client environment, fat client environment or a mixed environment. For instructions on how to install the thin client support, refer to the section, Installing LanSchool v7.2 in a thin client environment later in this manual.

- **Determine if you will be installing the software on Mac students**

The LanSchool student application will run on the Mac. For instructions on how to install Mac student software, refer to the section, Installing LanSchool v7.2 on a Mac later in this manual.

Run the Setup program

You must run the LanSchool v7.2 Setup program (SETUP.EXE) on each teacher and student computer that will use LanSchool.

LanSchool v7.2 installs to the C:\Program Files\LanSchool folder on each computer and stores all files locally on each computer.

Once the installation is complete (it takes about ten seconds to run for a Student install and up to one minute for a Teacher), the student or teacher program will start. The program will also re-start every time someone logs on to the computer.

To install LanSchool v7.2 on a teacher or student computer

- 1 In My Computer, go to the LanSchool product download location and double-click **Setup.EXE**.
- 2 Click **Next >**
- 3 Read the license agreement that appears, then click **I Agree**, then **Next >**
- 4 Select which type of installation you want (**teacher** or **student**), then click **Next**. Remember, it's best to select just one teacher computer per lab or room.
- 5 Choose a teacher channel number (1 to 16,000), then click **Next**. Remember to choose a unique number for each lab or room.
- 6 Click **Finish** to finish the installation. Every time someone logs on to the computer, LanSchool will auto-load all of its files and will be ready to use.

Scripting Setup.exe

If you wish to run SETUP.EXE from a script, there are some command-line options which will facilitate this.

- #x
 - Installs LanSchool with the Teacher Channel x. “x” must be an integer number from 1 to 16000.
- StUdEnT
 - Installs the LanSchool Student software
- TeAcHeR
 - Installs the LanSchool Teacher software
- QuleT
 - Disables all User Interface. Run SETUP.EXE in “quiet” mode. This option must be specified LAST in the command line.
- UNINSTALL
 - Uninstalls the LanSchool software from this machine
- NoLoAd

- Does NOT auto-start the software after installation. The software will start on a teacher machine after the next login. On student machines it will start after the next reboot.

For example, if you want to silently install a teacher on channel 1, your script should look like this:

Setup.exe #1 TeAcHeR QuleT

NOTE: The command line parameters are case sensitive!

Installing LanSchool via MSI

Both the LanSchool Teacher and Student can now be installed or uninstalled through MSI. The MSI files are in the MSI directory.

LanSchoolStudent.msi
LanSchoolTeacher.msi

Listed below are the LanSchool v7.2 command-line parameters for msixec:

Student Silent Install
msiexec /i LanSchoolStudent.msi /qn CHANNEL=57

Student Silent Uninstall
msiexec /x LanSchoolStudent.msi /qn

Teacher Silent Install
msiexec /i LanSchoolTeacher.msi /qn CHANNEL=57

Teacher Silent Uninstall
msiexec /x LanSchoolTeacher.msi /qn

Note: If you are using Microsoft's Active Directory we recommend using an Administrative Template file (.adm) to configure the LanSchool channel in each classroom. The LanSchool.adm file is in the MSI directory and can be configured using the Group Policy Editor. For a detailed movie on how to configure the .adm file, visit the free training section of our website.

Once LanSchool is installed

On the teacher computer, a LanSchool teacher icon will appear in the system tray at the bottom right corner of the computer screen. It is a small, greenish "circle of circles." To begin using LanSchool, right-click to open the LanSchool menu or left click to open the LanSchool console.

On student computers, a LanSchool student icon will appear in the system tray at the bottom right corner of the computer screen. If you place your cursor over the icon, it will tell you the teacher channel and IP address the student computer is using.

Installing LanSchool v7.2 in a thin client environment

One of the new features added to LanSchool in v7.2 is the ability to work in a Terminal Server, Citrix or NComputing environment. LanSchool allows thin client machines to be used as student and/or teacher machines. You can mix-and-match thin and traditional client machines ("fat clients") in the classroom.

Terminal Server 2003 Installation

Installation is a two step process. Initially, the Setup.exe program needs to be run on the Terminal Server console machine. This will copy all needed files to the Terminal Server but not run either the Student or Teacher software. If the Terminal Server is in "Execute" mode, the "After Installation" dialog will appear.

Since LanSchool v7.2 has been designed to install onto a Terminal Server, it is not necessary to complete this dialog. You can press the "Cancel" button on this dialog at any time.

When you are installing on the Terminal Server Console, both the Teacher and Student options will be checked. This is correct because you will be copying the executable files for both the teacher and student to the Terminal Server.

Once you have completed this step, the LanSchool must be properly configured to run on each desired thin client machine. You may do this in one of three ways:

1. Manual Student or Teacher Install

Login to a thin client terminal with Administrator rights and run the Setup.exe program again. Follow the wizard to assign that thin client as either a Student or Teacher machine. Repeat this for each thin client device in the lab.

2. LskTSDat.ini file

The previous "Manual Install" edits a LanSchool configuration file (C:\Program Files\LanSchool\LskTSDat.ini.) If you do not wish to run the Setup.exe file on each thin client, you can edit the .ini file directly with any text editor such as Notepad.

There is an entry in that file for each thin client which will be running either the LanSchool Student or Teacher software. The format of the .ini file is as follows:

```
[LanSchool TSClient List]
WYSE001001=Teacher, Channel=1, Name=Teacher1
WYSE001002=Student, Channel=1, Name=WYSE001002
WYSE001003=Student, Channel=1, Name=WYSE001003
WYSE001004=Student, Channel=1, Name=WYSE001004
```

The first part of each line (WYSE001001 in this example) is the "Client Name" of that thin client. Each thin client device has a unique Client Name set by the manufacturer or

during hardware configuration. You can find that name by logging into the device and entering the “SET” command from a command prompt. Many IT departments will have a list of Client Names for each thin client device.

Following the Client Name is the type of LanSchool software to run on that thin client device (either Student or Teacher.) The next parameter defines which LanSchool Channel to use for that thin client. Generally, all thin client devices in the same lab will have the same Channel number.

The last parameter defines the LanSchool Display Name. The student will appear in the Teacher Console with both the login name and this name. By default, we use the Client Name, but that can be changed if a more meaningful name is desired.

If you are load balancing (i.e. multiple Terminal Servers serving the same lab) you must install the LanSchool software on all Terminal Servers and then replicate the completed LskTSDat.ini file to all Terminal Servers.

3. Active Directory Installation

If the previous installation procedures do not provide sufficient flexibility, LanSchool can be loaded on demand via a login script in an Active Directory environment. You will have to be able to determine in the script if the thin client machine is a Student or Teacher. Please contact LanSchool Support for more detailed instructions if you need to use this method.

NComputing Installation

Installation in an NComputing environment is a two step process. Initially, the Setup.exe program needs to be run on the NComputing “Console” machine. This will copy all needed files to the NComputing Console machine and configure that Console machine to run the specified Teacher or Student software.

After LanSchool has been installed on the Console machine, you will need to run the Setup.exe program again each NComputing “Station” machine which is attached to the Console machine. This will NOT copy any additional files but will configure a LanSchool configuration file (C:\Program Files\LanSchool\LskTSDat.ini.)

If you do not wish to manually install LanSchool onto the “Station” machines, you can manually edit this configuration file as explained in the Terminal Server 2003 Installation section.

Limitations

While every effort has been made to implement all LanSchool functionality for thin client

devices, there are some limitations. The following is a list features that do not work on thin clients.

- USB limiting
- Printer limiting
- Power on
- Shutdown or Reboot
- Sound Muting
- Change student channel (now done from .ini file)
- Change student display name (now done from .ini file)
- Extensive student hardening (it is assumed that a thin client device is locked-down from the Server)

Installing LanSchool v7.2 in Secure Mode

LanSchool v7.2 has the ability to require teachers to type in a password when the console is launched to see students on a particular channel. This feature adds an extra level of security to prevent unauthorized consoles from being used.

Installation

To install the password protected version, find the file Setup_Secure.exe in the Secure directory.

Run this file on both the teacher and student workstations. During the install there is a new dialog that asks for a teacher password. This password should be the same for all students on a particular channel. During the teacher install, you are also prompted for a password. This should be the same password used for the students. It is required so that a teacher computer can use the “Become a Student” feature and still be secure.

When a teacher launches the console or changes channels, they will be prompted for a password to view the students on that particular channel or group of channels.

To install the password protected version on the student using a script, use the command-line option PasSwOrD=. QuleT must be the last option.

To silently install the secure student, on channel one, using the password “test”, type in the following:

Setup_Secure.exe #1 StUdEnT PaSsWoRd=test QuleT

To silently install the secure teacher, on channel one, using the password “test”, type in the following:

Setup_Secure.exe #1 TeAcHeR PaSsWoRd=test QuleT

The secure version of the student will show an “s” next to the version number in the console and on the student icon.

Note: If the teacher’s password is compromised, it will be necessary to re-install both teacher and student machines with a new password.

Currently there is NOT a way to install LanSchool v7.2 in Secure Mode with the LanSchool MSI files.

Installing LanSchool v7.2 on a Mac

One of the new features added to LanSchool in v7.2 is the ability to monitor and manage students using Macs. The installation process is still simple, but slightly different on a Mac. Please follow the instructions below to install the LanSchool student software on a Mac.

The LanSchool teacher software is still a Windows application and cannot be run natively on a Mac. However, the LanSchool teacher console can be run on Mac that is running Parallels or VMWare. To install the LanSchool teacher software on a Mac running Parallels or VMWare follow the normal Windows setup instructions.

Manual Installation

1. After downloading lanschool_setup.zip from the LanSchool Customer Portal, unzip the file. You should have a file called lanschool_setup.pkg.
2. Copy lanschool_setup.pkg to the Mac
3. Double click on lanschool_setup.pkg
4. Follow the installation wizard to the LanSchool Options page. This page allows you to set the following options:
 - Stealth Mode – If checked the student will not see the LanSchool icon and will not be able to ask the teacher questions through LanSchool.
 - Allow student to change channels – If checked the student will be able to change channels. This option is only recommended for 1:1 schools.
 - Disable keyboard monitoring – If checked the student's keystrokes will not be logged.
 - Secure mode – If checked a teacher must enter a password to manage the student. We recommend that the same password be used for the whole class or school. If you forget the password, you must re-install the software.
 - Teacher channel – Choose a teacher channel number (1 to 16,000). Choose a unique number for each lab or room.
5. Click Continue
6. If desired you may change the installation location. However, we recommend installing to the default location.
7. Click Install
8. The installer will ask you for the administrator password on that machine. Type in the password and click OK.
9. After the installation is successful, click the Close button on the final page of the wizard.

Automated Installation

The `lanschool_setup.pkg` file is a standard Apple Installer package. It can be remotely, automatically installed with any tool that can remotely deploy installer packages.

When Installer packages are run by an automated install, there is no opportunity to enter information in the interface such as channel number or password.

This section describes two ways of configuring the LanSchool student when you are using an automated tool to deploy the package and the default install options are not what you desire.

The LanSchool settings are controlled by a secure file called `com.lanschool.student.settings.plist`.

Here is an example of the default settings file:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN"
"http://www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
<dict>
    <key>AllowKeyboardMonitoring</key>
    <integer>1</integer>
    <key>Channel</key>
    <integer>1</integer>
    <key>OneToOne</key>
    <integer>0</integer>
    <key>SecureMode</key>
    <integer>0</integer>
    <key>StealthMode</key>
    <integer>0</integer>
</dict>
</plist>
```

As you can see, each option in the file is followed by a value surrounded by `<integer>` and `</integer>`. Those familiar with Mac computers will recognize this as a standard XML plist file. The value following the option name determines whether the setting is on (1) or off (0).

If you are doing a remote, automated deployment and you need to configure the student differently than the default settings, there are two ways to proceed: by modifying the settings file inside the package before installation, and by using the `lsconfig` utility any time after installation.

Modifying the Settings File inside the package

The easiest way to configure the student settings is to modify this file inside the package and then deploy the package to your computers. It can be easily modified on a Mac by right clicking (or control-clicking) the `lanschool_setup.pkg` file and selecting "Show Package Contents". The file is `/Contents/Resources/com.lanschool.student.settings.plist`. Use your favorite text editor to modify the values according to your desired configuration.

Using the package with the modified settings file will allow the install to work correctly in a remote automated deployment.

The Isconfig Utility

Another way to configure the LanSchool student is to use the Isconfig utility, which is located in `/Library/Application Support/LanSchool/` on the student. This utility is installed on each client and can be run at any time after installation. The utility must be run by a super user on the student computer because the settings file is owned by root.

The following parameters can be passed to the Isconfig utility:

StealthMode – sets whether or not the student will not see the LanSchool icon and will not be able to ask the teacher questions through LanSchool.

Channel - sets the teacher channel.

AllowKeyboardMonitoring - sets whether or not the student keystrokes are logged.

OneToOne - sets whether or not the student can change the teacher channel.

SecureMode - sets whether or not the student is in Secure Mode.

Here is an example of how to change the teacher channel:

```
sudo ./Isconfig Channel 24
```

Here is an example of how to activate Secure Mode:

```
sudo ./Isconfig SecureMode 1
```

The other options can be configured by simply using the option name and the desired value, usually a 1 or a 0, except in the case of the teacher channel where the value could be between 1 and 16,000.

After changing the student settings the Isconfig utility can restart the student software with the following command-line. This will cause the student to take notice of the new settings:

```
sudo ./Isconfig /restart
```

Running LanSchool v7.2 in Kiosk Mode

Running LanSchool v7.2 in Kiosk Mode

In LanSchool v7.2 you can run the Teacher Console in Kiosk Mode. This mode makes the LanSchool console so it cannot be minimized or terminated.

Registry change for Kiosk mode

To run the LanSchool console in Kiosk mode follow these instructions.

1. On the teacher computer, install the LanSchool teacher
2. Open regedit.exe
3. Browse to
HKEY_LOCAL_MACHINE_SOFTWARE_Microsoft_Windows_CurrentVersion_Run
4. Add KiOsK to the LanSchool Teacher Key

c:\Program Files\LanSchool\Teacher.exe KiOsK
5. Click OK
6. The next time the system is rebooted, the LanSchool Teacher Console will run in Kiosk Mode.

Configuring LanSchool Options

LanSchool is easy to configure. All options are controlled by one dialog with five tabs. Most options are controlled by making a change to these settings on the Teacher computer.

The available configuration tabs are:

- Teacher
- Student
- Web Limiting
- Application Limiting
- Network

Teacher Options

The **Teacher** tab lets you configure the following options:

Show Teacher Screen

Full Screen

The teacher's screen will be shown on the student's screens. The students will not be able to control their mice and keyboards during Show Teacher.

Windowed

The teacher's broadcasted screen will appear in a window on the students' screens. This way the students can "follow along" with the teacher and use their computers during the teacher's broadcast session.

Color Reduction

Limits the number of colors used by the Teacher during Screen Broadcast and Remote Control. This both improves performance and lowers network bandwidth requirement.

Note: These settings are also used when you show a student screen to other students.

Teacher Video Accelerator

Performance

This option **enables** the Teacher Video Accelerator. It will give better Teacher-Broadcast performance. This option is only available on Windows 2000 or higher teacher machines and is not available in a terminal server environment.

Compatibility

This option **disables** the Teacher Video Accelerator. This should only be selected if the Teacher-Broadcast mode does not work properly with OpenGL or DirectX applications.

Blank Screens Message

This option allows you to specify the text to display on the student's screens when they are blanked. The last 10 messages are saved so they can be quickly selected when blanking screens.

Student Options

The Student tab lets you configure the following options:

Remote Control

Disable Student Keyboard and Mouse

This option allows the teacher to "lock-out" the student's inputs while the teacher is Remotely Controlling a student computer.

Color Reduction

Limits the number of colors used by the Teacher during Screen Broadcast and Remote Control. This both improves performance and lowers network bandwidth requirements.

Student Thumbnails

Thumbnail Size

This options lets you determine the default thumbnail size when monitoring student computers. The best fit options will automatically choose a thumbnail size based on the number of students and the available screen area.

Show Current Application Icon On Thumbnails

When in the thumbnail view, this option will show an icon in the upper left hand corner that represents the current application that the student is running.

Show Last Visited Website Icon On Thumbnails

When in the thumbnail view, this option will show an icon in the upper right hand corner that represents the website that the student last visited.

LanSchool Folder on Student

Student Folder

This option lets you specify the path of the LanSchool folder on student machines. This can be on the hard drive or network drive.

Web Limiting

The Web Limiting tab lets you configure the following options for Windows-based computers. On the Mac, selecting any of the options blocks all Web browsing on the student:

- **Block All**
This option blocks all web browsing, instant messaging and e-mail programs.
- **Allowed Web Sites**
This option allows you to type in a list of websites that are allowed when Limit Web is turned on.

The lists of websites can be saved and loaded by using the Load and Save buttons. The files are saved as .lsu files.

- **Block the following Web Sites**
This option allows you to type in a list of websites that are blocked when Limit Web is turned on.

The lists of websites can be saved and loaded by using the Load and Save buttons. The files are saved as .lsu files.

- **Display notification on student when web is accessed**
This option will turn on or off the notice that is displayed on the student when they try to access a website when Web Limiting is turned on.

Note: In both the Allowed and Blocked Websites sections you may use the "" and "?" wildcards to specify websites.

Application Limiting

The Application Limiting tab lets you configure the following options:

- **Allowed Applications**
This option allows you to specify a list of applications that are allowed when Limit Apps is turned on.

The lists of applications can be saved and loaded by using the Load and Save buttons. The files are saved as .lsa files.

Applications can be typed in directly, added by clicking on the add button and selecting an active application on the Teacher's computer or by adding an application from the Student's machine by clicking on View Student's Running Programs in the Monitor menu.

- **Block Applications**
This option allows you to specify a list of applications that are blocked when Limit Apps is turned on.

The lists of applications can be saved and loaded by using the Load and Save buttons. The files are saved as .lsa files.

Applications can be typed in directly, added by clicking on the add button and selecting an active application on the Teacher's computer or by adding an application from the Student's machine by clicking on View Student's Running Programs in the

Monitor menu.

- **Limit Task Manager or Activity Monitor on Student**

Check this option if you want to limit the student's access to Task Manager (PC) or Activity Monitor (Mac).

Network

The Network tab lets you configure the following options:

Data Transmission

IP-Broadcast

This default option used broadcast packets when the teacher needs to contact all student machines.

Note that broadcast packets do not cross subnets or VLANs. If you need to cross a subnet or VLAN we recommend either IP-Multicast or IP-Directed Broadcast.

IP-Multicast

Transports LanSchool data to students via TCP/IP-Multicast. Multicast allows networking hardware to keep LanSchool traffic local to LanSchool computers. If your network hardware supports this option, it's highly recommended.

IP-Directed Broadcast

If the teacher is on a different IP-Subnet from some or all of the students, and Multicast is not possible, this option can be used. To calculate the proper address, use the DirBCastAddr.exe utility in the Utilities folder on the LanSchool product download.

NOTE: Some additional configuration of the Routers/Switches may be needed to enable Multicast and/or Directed Broadcasts on your network. Consult your hardware guide for your switches/routers to be sure.

Multiple Network Adapters

Specify Network Interface Card

Some computers actually have more than one Network Interface card (NIC) and/or multiple IP addresses (i.e. a router). Many times these may be virtual or wireless network adapters.

LanSchool will always use the "first" NIC, but that is not always the desired NIC or network. You can use this checkbox to specify which NIC to use.

If your teacher computer has multiple real or virtual network adapters, specify the adapter that LanSchool should use.

Teacher Channel

Channel Number

This feature is normally disabled so that teachers cannot change the channel

number. There is a utility called EnableChannelSelect.exe that is available in the utilities directory in the product download.

If you need to change the Teacher Channel this utility will enable the channel number selector.

Here are the command-line parameters for EnableChannelSelect.exe

EnableChannelSelect.exe TRUE

EnableChannelSelect.exe FALSE

*Note: EnableChannelSelect.exe will also make it so that teachers or administrators can change student channels remotely. To access this feature, Click on Administer, then Change Student Channel...

Administrator Channel

Channel "0" is the administrator channel and will watch all channels.

Use Multiple Channels

This feature allows the teacher machine to "group" any of the 16,000 channels. Each channel must be separated by a comma. For example: 1,3,4 will configure the teacher console to be able to monitor all students on channels 1, 3 and 4 at the same time.

Changing Channels

If you ever need to change the channels of student computers there are several ways to accomplish this task.

1. Re-install the product and select a new channel
2. Run setchannel.exe, which is located in the utilities directory
3. Change the channel from the LanSchool Console. If EnableChannelSelect.exe has been run, it is possible to change the student channels from the console.
 - a. Select the machines
 - b. Click Administer, Change Student Channel...
 - c. Select the new channel
 - d. Click OK.

Updating the LanSchool Teacher

To update LanSchool, simply run the SETUP.EXE again. It will automatically update the files which are used. As long as the original LanSchool is at least v6.0, there is no need to uninstall the old version before installing the new version. If the old version is previous to v6.0, uninstalling is not required, but is a good idea. You can obtain an uninstall utility by asking for it from support@lanschool.com.

Updating LanSchool Student Software

Improvements to the LanSchool software are released as needed. If you ever wish to update the student PC's to the latest build of LanSchool, there is an automated way to do this. **It is no longer necessary to re-install the software on all student computers.**

1. Begin by reinstalling the latest build of LanSchool onto the teacher machine (see "Updating LanSchool" section above.) Now copy the SETUP.EXE file to the LanSchool Install folder on the teacher's machine (the default folder is C:\Program Files\LanSchool).

If you are using Deep Freeze or some similar "lock-down" software on the student computers, you will have to disable it during this update procedure to allow the new software to be installed onto the student computers.

NOTE: if you are using either the Stealth, No Keyboard Monitoring, Secure or One-To-One version of LanSchool, you will have to rename the setup utility used to "SETUP.EXE" and copy the file as indicated above to the LanSchool Install folder on the teacher's machine.

2. In the LanSchool console, select the students that you would like to upgrade.

Click "Administer" and then "Update LanSchool on Selected Students" menu option.

3. This will take a few seconds for every student selected. When it is done, you may have to press the "View", then "Refresh" menu item (F5) to see the newly installed version on the student computers.

This is an ideal way to update student computers from the **30-day demo** version to the latest **retail** version.

By default, the SETUP.EXE file is not copied to the LanSchool Install folder. Most schools do not want teachers updating student computer software. For these schools, an administrator can copy the SETUP.EXE file, perform the update and then remove the SETUP.EXE file.

NOTE: This method will only work if there already is a v6.5 or newer student.exe running on the student computer. This method cannot be used to upgrade a v6.2 student to v7.2 student. That requires a reinstallation of the software.

Uninstalling LanSchool

If you need to uninstall LanSchool at any time, it's easy to do. The following procedure removes all LanSchool files from a teacher or student computer.

To uninstall LanSchool v7.2 from a teacher or student computer

- 1 From the Start menu, click **Run...** and Browse to the **SETUP.EXE** program.
- 2 Double-click **SETUP.EXE**
- 3 Accept the license agreement, click **Next**
- 4 Click **"Uninstall LanSchool From This Computer"**, then **Next**
- 5 Click **Finish**
- 6 You might have to reboot the computer to successfully delete all LanSchool files.

Note: This is NOT performed by the usual **Add-Remove Programs** option on the Control Panel. Since LanSchool is designed for a student lab environment, care must be taken to keep students from "uninstalling" LanSchool.

To uninstall LanSchool using MSI, use the following command-line parameters:

Student Silent Uninstall
`msiexec /x LanSchoolStudent.msi /qn`

Teacher Silent Uninstall
`msiexec /x LanSchoolTeacher.msi /qn`

To uninstall LanSchool on a Mac:

To uninstall the LanSchool student on a Mac, run the following shell script with super user privileges.

```
/Library/Receipts/lanschool_setup.pkg/Contents/Resources/uninstall.sh
```

LanSchool Security Monitoring

With a tool as powerful as LanSchool, there's always a possibility for misuse. A student may be tempted to find an unauthorized copy and load the teacher software to disrupt a class.

There are two ways to deal with possible misuse.

1. Set school policies around appropriate behavior, monitor and enforce the policy.
2. Install LanSchool v7.2 in Secure mode, which requires a password.

It is generally more effective and easier for schools to set policies about appropriate behavior in the training lab and set punishments for policy abuse. LanSchool helps facilitate the enforcement of your policy. Every time you broadcast, view, or blank-out a student screen, as well as remove a student from the teacher channel list, an entry is made in the registry of the affected student computer.

The entry is a "digital fingerprint" that tells what action was done, when it occurred, and who did it. If someone is suspected of misusing LanSchool, use the Windows utility REGEDIT to look at any student's local registry and quickly identify the person.

To use REGEDIT to view a LanSchool action

- 1 At a student computer, click **Start | Run**.
- 2 In the text box, type **regedit**. Click **OK**. A Registry Editor window will appear, with several folders.
- 3 Look at the key **HKEY_LOCAL_MACHINE\Software\LanSchool** for information about any LanSchool actions that took place on this computer.

Security Monitor is also available in the utilities folder on the LanSchool download image. This application runs on any machine and will capture a log of LanSchool activity, including the installation or un-installation of any LanSchool program. With this utility, many schools have quickly been able to pinpoint students who are abusing the "appropriate use policy" of their computer lab. There is a Security.pdf file in the same folder which describes this utility in detail.

In LanSchool v7.2 you can also access the Security Monitoring data by clicking "View" then "Status Window". It is not necessary to start the command-line utility. As soon as you perform actions you will see the security logging data.

Students downloading and installing a demo version of LanSchool caused the largest security problem with the previous versions. Starting with LanSchool v6.1, the demo version cannot interact with the released version. It is doubtful that students will be interested in purchasing a full version, just to play a prank. However, if they do, the above-mentioned steps will allow you to quickly locate the offending students.

LanSchool in a NAL environment

NAL (Netware Application Launcher) is part of the **Novell ZEN Works** package. NAL can be used to control the student desktop, giving students access to only administrator-approved applications. In the most restrictive mode (and perhaps most useful mode for schools), ONLY the applications specified can be run.

To install LanSchool in a NAL environment, push out both the teacher and student programs using the supplied .MSI files.

Note for Teacher Machines:

If the teacher's machine is also locked-down by NAL, the teacher will not have a System Tray and will not be able to click the LanSchool Teacher Icon to control LanSchool. Instead, the hot-key sequence "<Ctrl><Alt><L>" can be used to bring up the LanSchool Teacher's menu.

Testing and Verifying

Once LanSchool has loaded, you can see the LanSchool icon in the System Tray on all student machines.

You can check to see what channel it is by hovering the mouse over this icon.

If the Teacher machine and the student machines are all set to the same Teacher Channel, all should work properly.

Wake-On-LAN Support

Wake-On-LAN (WOL) technology can be used to remotely “power-on” student computers. However, student computers must be configured to enable WOL. The steps needed to do this vary with every computer model. Generally, the computer needs special hardware to support this and there is a BIOS switch which needs to be enabled. It is best to consult with your computer supplier to determine the actual steps needed.

In the **utilities** folder of the LanSchool v7.2 product download, there is a utility, WakeUp.exe, which can test compliance of WOL.

This utility will send a WOL “Wake Up” signal to a specified target computer. To use this utility, you will need two computers: the target machine and a console machine. Both will need to belong to the same IP subnet. You will have to determine the Physical MAC Address of the target machine. If this machine is a win9x machine, you can use the Window’s winipcfg.exe utility. Otherwise, you can, from a DOS box, run the IPCONFIG /ALL command.

Once you have the Physical MAC address of the target machine, shut down that machine and from a DOS box on the other (console) machine you can run the WakeUp.exe utility. This will send the WOL Wake Up packet to the target machine.

If WOL is properly configured on the target machine, it will then power-on. If not, you will have to check with the hardware manufacturer to see what additional steps need to be taken. If WOL is not properly configured on a student machine, the LanSchool teacher machine will NOT be able to perform a WOL Wake-Up on that machine.

802.11 Wireless Support

Special Hardware Requirements

Please make sure that all computers are using the latest NIC (Network Interface Connector) drivers available from the NIC vendor. The “world of wireless” is similar to the LAN environment of a decade ago. Wireless network drivers are being updated and improved almost monthly.

Also, there are two basic types of Access Points: Residential and Enterprise. The easiest way to differentiate is with the price.

A “Residential” Access Point will generally sell for around \$100 (i.e. LinkSys, DLink, Belkin, etc...). They work fine in a home environment where several computers will be sharing an Internet link and perhaps a printer.

The “Enterprise” Access Point is designed to truly support 50 or more clients at the same time. They generally sell for around \$300. Unless you really have less than five student computers, you want an “Industrial” class Access Point. (Our favorite is the HP 420, but similar products are produced by Dell, Cisco (NOT the LinkSys division), IBM, etc...) This will benefit not only LanSchool, but general student computing as well.

Installation

It is assumed that all student and teacher machines will be using 802.11 wireless NIC's. Also, it is assumed that all wireless computers are associated to the same Access Point. Other than this, there are no other special installation concerns. Simply run the SETUP.EXE program on the teacher and student computers, as specified earlier in this installation guide.

Performance

The speed of the teacher's screen broadcasts to student computers will NOT be as good over a wireless network when compared to the performance over a wired network. There is no way to overcome this.

A wired network can send broadcast and multicast data at 100Mbps per second. An 802.11 wireless network generally sends broadcast and multicast data at 1MBit per second (a mere 1% of the wired speed).

In addition to the drastic bandwidth reduction of wireless networks, the Access Point architecture of 802.11 will quite often add significant propagation delays to broadcast and multicast data. (This is due to the Power Save architecture of the 802.11 world...)

However, the LanSchool Teacher Broadcast feature will still work reasonably well. Even complex teacher screens should appear on student screens within three seconds. Simple teacher screen changes should appear almost immediately.

Wireless Performance Tweaks

If you optionally wish to improve performance, you can attempt to configure your Access Point. Since this differs from vender to vender, we can only give general guidelines. You'll

have to consult your Access Point's manual to see how to actually make the change on your particular Access Point.

1. Drop the Beacon Interval as low as possible (generally, this can go down to 50ms).
2. Set the DTIM to ZERO. (This allows broadcast and multicast packets to be sent after EVERY beacon packet.)
3. Increase the Broadcast or Multicast speed. (Not all AP's allow this to be set)

Additional LanSchool Utilities

LanSchool is constantly being improved. A few useful utilities can be found in the **Utilities** folder on the LanSchool product download. If you have questions about these utilities, e-mail support@lanschool.com.