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Preface

Thank you for selecting LanSchool Lite v8.0 Classroom Monitoring Software. LanSchool Lite v8.0 Classroom Monitoring Software is an award-winning software program designed to help teachers, tech coordinators, librarians, professors and administrators monitor students in a 21st century classroom.

With LanSchool Lite installed on each computer in a classroom, a teacher has the ability to monitor student activity within a classroom setting. From either a list or the real-time thumbnail view you can monitor students and, at a glance, see their current application and website.

LanSchool Lite is a free* version that contains just the monitoring features of our full featured classroom management software, LanSchool v8. If you are interested in additional features such as blanking screens, limiting the Internet, applications, printing and USB thumb drives please visit our website at https://www.lenovosoftware.com/lanschool

This guide explains how to install and use LanSchool Lite v8.0 Classroom Monitoring Software. It was last updated on September 9th, 2016.

*YOU MUST BE A CURRENT K-20 SCHOOL TEACHER, TECH COORDINATOR, LIBRARIAN, PROFESSOR, OR ADMINISTRATOR THAT REGISTERS AT WWW.LANSCHOOL.COM TO BE ELIGIBLE FOR A FREE VERSION OF LANSCHOOL LITE.

Topics

Important Information
Installing LanSchool Lite v8.0
Technical Support
Important Information

This section contains important information about your LanSchool Lite Product.

About LanSchool Lite

Since 1986 LanSchool Lite has delivered market-leading software that helps teachers, professors and trainers teach more effectively in a 21st century classroom.

Product Documentation

The following documents form the LanSchool Lite v8.0 Classroom Monitoring Software documentation set:

- *LanSchool Lite v8.0 Users Guide* (users.pdf)— This document guides you how to install and use the product.
Supported Environments

LanSchool Lite v8.0 supports any combination of computers running the following operating systems:

Windows XP-32, Windows Vista-32/64, Windows 7-32/64, Windows 8-32/64, Windows 10-32/64, Windows 2003, 2008 and 2012 Terminal Server, NComputing devices, Mac OS 10.7 or greater, iPads, iPods and iPhones iOS 8 and greater, Android 4.4 and greater.

Support for NComputing devices is dependant on the device model and version of the vSpace software installed. Please see the FAQ at https://helpdesk.stone-ware.com/portal/helpcenter/stonewarehd/lanschool for specific information on the platforms and vSpace versions that will work with LanSchool software.

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

Processor

PCs: 166 MHz Intel® Pentium® processor or faster

Macs: 64-bit Intel-based Mac’s

RAM

- 128 MB for Windows XP
- 256 MB for Windows Vista/7/8/10
- 512 MB for Mac OS X

Protocol stack

All computers running LanSchool Lite 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

Every effort has been made to design this software for ease of use and to be problem free. If problems are encountered, please contact Technical Support.

Email: support@lenovosoftware.com
Phone: 1-877-394-0443 (Toll Free USA), 1-260-492-2357 (International)
Hours: 8:00am to 6:30pm (Eastern Time)

Contact Information

- Web: http://www.lenovosoftware.com/lanschool
- Email: sales@lenovosoftware.com
- Phone: 1-888-473-9485 (Toll Free USA), 1-860-819-3774 (International)
- Fax: 1-866-596-2088 (USA Fax), 1-317-229-6320 (International Fax)
- Hours: 8:00am to 5:00pm (Mountain Time)
- Address:
  Stoneware Inc.
  PO Box 3352
  Carmel, IN 46082
  USA
Installing LanSchool Lite v8.0

This chapter describes how to install LanSchool Lite v8.0 Classroom Monitoring Software.

Topics

Planning the Installation
LanSchool Lite v8.0 Network Configuration
Installing LanSchool Lite v8.0 on Windows
Scripting or Mass Deploying LanSchool Lite via MSI
Installing LanSchool Lite v8.0 in a Thin Client environment
Installing LanSchool Lite v8.0 on NComputing Devices
Installing LanSchool Lite v8.0 in Secure Mode
Uninstalling LanSchool Lite v8.0 from a Windows Computer
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Configuring LanSchool Lite Preferences
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LanSchool Lite in a NAL environment
802.11 Wireless Support
Additional LanSchool Lite Utilities
How LanSchool Lite Works
Using the Teacher computer
About the Student computers
User Interface Tips
LanSchool Lite Feature Overview
Planning the Installation

Before installing LanSchool Lite v8.0, review the following requirements and ensure your network and computers are running smoothly. Doing so will prevent problems during installation.

By taking a few minutes to plan out your installation, you should be able to install LanSchool Lite on each computer in two minutes or less.

Consider these issues before beginning installation:

Choose between a normal classroom / laptop cart environment or the 1:1 environment

For a normal classroom / laptop cart environment, follow the normal installation instructions later in this manual.

If you are running LanSchool Lite in a “1:1” environment, where each student has their own computing device, decide whether or not you want the students to have the ability to change their channel to the teacher’s channel or if you want teachers to create a list and automatically bring the students into class.

We recommend automatically bringing the students into class.

Here’s how it works:

1. Setup all student computers with a default “home” channel which is not used by any teachers.
2. Setup each teacher on their own unique channel. Using their classroom number works well.
3. Install the student computers with the default option not to change channels.
4. Create a Class List manually or dynamically. These lists can be created based on either their login id, active directory name or computer name. The methods to create these lists are described in the section “Implementing Class Lists”.
5. In the Teacher console, select the students for the current class or load the appropriate Class List. This will ‘pull’ students from their home channel temporarily to the channel the teacher is on.
6. Dismiss the class. When the current class list is dismissed, all students in the current class will be assigned back to their home channel. Forgetting to actively dismiss the class is not a problem however, as another teacher will be able to pull students to their channel when loading their own class list.

Note: If you prefer the students to have the ability to select a teacher channel, when you run the student installation on the student computers, check the option in the Advanced Options, Student Can Change Channels.

Choose a unique teacher channel for each classroom (normal classroom setup)

LanSchool Lite v8.0 is designed to work with as many as 16,000 different classrooms 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 classroom should have its own unique channel.
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 Lite classroom is on your network, you can choose any number from 1 to 16,000. If you have multiple LanSchool Lite classrooms, each requires its own unique teacher channel number.

For each classroom, decide which computer will be the Teacher computer

Generally, you want to set up one Teacher computer per classroom. The teacher will use this computer to control all student computers in the same classroom. During installation, you'll have to specify whether the computer is a “Teacher” or a “Student” computer, by selecting the appropriate .msi file.

You may setup more than one teacher computer per classroom, but the first Teacher to perform any “limiting” actions takes preference over subsequent Teachers that try to perform the same “limiting” action in most cases. If the first Teacher goes offline for any reason, the subsequent Teacher’s limiting actions take over, so it is a good idea to ensure the settings are the same. If no Teacher is present on the current channel the Students will revert to their home channel in about 20-30 seconds.

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 is best if the teacher and student computers are all on the same IP subnet. LanSchool Lite v8.0 will work with static IP addresses, but they are not required.

If teacher and student computers are not on the same IP subnet, use Multicast or an IP Directed Broadcast and verify that the switches support those features. More information on choosing the transport and discovery method is available in the “Installing LanSchool Lite v8.0 in a VLAN” section.

Use good networking hardware and software

If your classroom already experiences network errors, LanSchool Lite v8.0 will not perform correctly. If you are experiencing problems logging onto computers or copying files over the network, resolve these issues before installing LanSchool Lite.

Use an enterprise class access point

If you plan on using LanSchool Lite v8.0 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 Student connections.

Determine whether or not you want students to access the LanSchool Lite v8.0 icon

If you do not want students to access the LanSchool Lite icon, run the Student installation, select Advanced Options and select Stealth Mode.

Determine whether you want to run LanSchool Lite using one of the Security Modes

LanSchool Lite provides two security modes for installation. It can be installed with one or both security modes selected. Running LanSchool Lite v8.0 in Password-Secure Mode requires a teacher to type in a password in order to see students on a particular channel. If this mode is selected for the Teacher install, the same mode must be selected for the Student installs. For installation instructions, refer to the section “Installing LanSchool Lite v8.0 in Secure Mode” later in this manual.
Running LanSchool Lite v8.0 in Active Directory Secure Mode requires a teacher to be a member of the Domain User Group, *LanSchool Teachers* to see students on a particular channel. For installation instructions, refer to the section “Installing LanSchool Lite v8.0 in Secure Mode” later in this manual.

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

LanSchool Lite v8.0 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 Lite v8.0 in a Thin Client Environment”.

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

The LanSchool Lite Student and Teacher applications will run on the Mac. For instructions on how to install LanSchool Lite v8.0 on a Mac, refer to the section, “Installing LanSchool Lite v8.0 on a Mac” later in this manual.

**Determine if you will be including iOS devices in the classroom**

LanSchool Lite provides free software to include Apple devices such as the iPad, iPhone or iPod into the classroom. For instructions on how to include these devices, refer to the section, “Installing LanSchool Lite v8.0 on the iPad, iPhone, or iPod” later in this manual.
By default, LanSchool Lite assumes that all Students will be on the same IP-subnet as the Teacher. However, it is possible to configure LanSchool Lite to function properly even when the Teacher resides on a different subnet (or even a separate segment) from the Student.

**IP-Subnets and VLANs**

If the Teacher is on a different IP-Subnet from the student computers, the default “IPBroadcast” UDP packets used by LanSchool Lite will not be received by the Student, and that machine will not be displayed in the Student List. Instead, you must configure the Teacher software to use either IP-Multicast or IP-Directed Broadcast packets.

IP-Multicast supports the ability to have one device (a Teacher) send a message to a set of recipients (Students) with special multicast addresses rather than a single device. IP-Directed Broadcasts are special addresses which (when properly formed) will traverse your network as a single directed UDP packet until the destination subnet is reached. Upon reaching the destination subnet, the router will then convert the packet into a standard UDP-Broadcast packet.

For either transport method to work, it is important to first verify that your network routers have support for that feature enabled. For IP-Directed Broadcast to work, your routers must also be configured to forward IP-Directed Broadcast packets (sometimes routers refer to these as “UDP Directed Broadcasts) and the address of these packets must be properly formed. You should contact your network administrator or refer to your hardware manufacturer’s documentation for further information on your network device features and configuration.

**LanSchool Port Usage**

LanSchool’s original main port number was 796 (or 0x31C hex). Starting with LanSchool 7.7, a high port is also leveraged, 11796 (or 0x2E14 hex) specifically for operating systems that require special privileges for communication with ports 1024 and lower (i.e. Android). LanSchool intentions are to eventually transition off of port 796 in favor of 11796, in 7.7 both ports are leveraged.

All non-status broadcast and multicast packets are sent to these ports (796, 11796). The source port for these packets is dynamic (sometimes referred to as ephemeral), meaning it is decided by TCP/IP at run time and cannot be specified. Generally it is in the range of 49152–65535. All LanSchool PC's must allow data traffic on port 796 and 11796 to be received and should not attempt to curtail the transmittal of data on ephemeral sockets.

When a LanSchool Teacher is performing an action on a specific Student (i.e. Remote Control, Thumbnail acquisition, Chat, etc.) the session oriented TCP packets are used. If the Student is a Fat Client machine, then the destination port will also be 796 or 11796. Again, the source port is dynamic.

Thin Clients are a special case. All UDP non-status broadcast and multicast packets are still sent to port 796 and 11796, but if the Student is a Thin Client Student, all TCP packets are sent to a dynamic port. The port for each Student is therefore unique. In this case, it is possible for a Teacher to send a TCP packet from a dynamic port to a dynamic port. However, in the Terminal Server environment, most TCP/IP traffic takes place within the same computer and is little more than inter-process communication.
There is one additional UDP Status packet which is used to monitor LanSchool activity on the network. This traffic originates on port 1053 and is always sent to port 1053. It is either a broadcast or a multicast packet. LanSchool will function without Status Packets, but functionality is reduced (especially for a 1:1 environment where the enrollment data packets are used to detect when a Student prematurely leaves a class.)

All Multicast packets are in the address range of 239.0.208.0 to 239.0.208.255. If IP-Multicast is the transport method chosen, then the router must be configured to forward data in this address range. If IP-Directed Broadcast is chosen, then it also must allow all traffic on port 796 (0x031C), 11796 (0x2E14), and port 1053 (0x41D) (either source or destination) to freely move between the subnets.

LanSchool Lite provides a tool to assist you in determining the proper address to use in the IP Directed configuration. It is called DirBCastAddr.exe, and it’s available in the install package. After unzipping the package, the tool can be found in the Utilities subfolder inside the Windows folder. Click on the file and then enter the IP address of any student machine on the target subnet, along with the subnet mask for that subnet. After both addresses have been entered, click on the “Calculate” button.

**Configuring LanSchool Lite for use with IP-Multicast or IP-Directed Broadcast**

After configuring your network devices as described, configure the LanSchool Lite software to use that transport method.

1. Select Administer | Preferences from the console menu on the Teacher computer.
2. On the Network tab, choose either IP-Multicast or IP-Directed Broadcast in the Data Transmission section.
3. If IP-Directed Broadcast is the preferred method, enter the IP address determined to be the correct one as shown by the DirBCastAddr.exe utility. If a specific Teacher machine must communicate with Student machines in more than one subnet, add the addresses for the subsequent subnets.

Each Teacher installation should be configured with only the subnets where Students with whom they interact with reside. So different Teacher machines can and will have different subnet addresses listed in the Network configuration dialog in those environments with more than three subnets. In the rare case that more than three subnets are needed for a specific Teacher installation, please contact Technical Support for further assistance.
Installing LanSchool Lite v8.0 on Windows

LanSchool Lite v8.0 has two installation programs for Windows.

- teacher.msi
- student.msi

To install LanSchool Lite v8.0 you must run the appropriate .msi file on either the teacher or student computer. The install creates a C:\Program Files\LanSchool Lite folder on each computer and stores all files locally.

Once the installation is complete, the Student or Teacher program will automatically start each time the computer is started. The teacher computer will display the LanSchool Lite icon in the system tray at the bottom right corner of the computer screen. It is a small, green “circle of circles.” To begin using LanSchool Lite, right-click the icon to open the shortcut menu or left click to open the LanSchool Lite console.

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

To install LanSchool Lite v8.0 on a teacher computer

1. In My Computer, go to the LanSchool Lite product download location and double-click teacher.msi in the Windows folder.
2. Click Next.
3. Read the license agreement that appears, then click I Accept, then Next.
4. Type in a Teacher channel number (1 to 16,000), then click Next. Remember to choose a unique number for each classroom.
5. If necessary, set any Advanced Options. Check the box “Check to configure advanced options.” Most of these options only apply to the Teacher when it becomes a Student computer.
6. Select a Security Mode option if desired. Selecting either mode is not required, and is not recommended unless you have read the section “Installing LanSchool Lite v8.0 in Secure Mode” later in this guide. Checking the box to Enable a security mode allows you to then select one or both security modes. If Password Secure Mode is selected, then both Teacher and Student installs require that password to subscribe to a channel. If Active Directory Secure Mode is selected, then the teacher must belong to an Active Directory group called “LanSchool Teachers” that must be created by your IT staff.
7. Click Install.
8. Click Finish to complete the installation.
9. If a Teacher was previously installed on that device, then a reboot will be required in order to update the existing files.

To install LanSchool Lite v8.0 on a student computer

1. In My Computer, go to the LanSchool Lite product download location and double-click student.msi in the Windows folder.
2. Click Next.

3. Read the license agreement that appears, then click *I Accept*, then *Next*.

4. Type in the Teacher channel number (1 to 16,000) that will manage that Student, or in 1:1 environments enter the Home Channel number determined for that student device. Remember to choose a unique number for each classroom. Click *Next*.

5. If you’d like to set any Advanced Options, check the box “*Check to configure advanced options*”.

6. Set any advanced options.

7. Click *Install*. 
Scripting or Mass Deploying LanSchool Lite via MSI

If you want to run teacher.msi or student.msi from a script or desktop management tool, there are command-line options to install LanSchool Lite. Run msiexec.exe and each value should be set to a non-null value such as 1 to enable that feature. Msiexec.exe command-line parameters are found by running msiexec.exe. Msiexec.exe is a Microsoft program.

- **CHANNEL=“X”**
  Installs LanSchool Lite with the Teacher Channel X. “X” must be an integer number from 1 to 16000.

- **ADVANCED_OPTIONS**
  Required to set advanced options

- **STEALTH_MODE**
  An advanced option, when set to a non-null value, the LanSchool Lite icon will not be shown on the student computer.

- **STUDENT_CHANGE_CHANNEL_MODE**
  An advanced option, when set to a non-null value, the student can change teacher channels.

- **AD_SECURE_MODE**
  When set to a non-null value, the teacher or student will enter Active Directory Security Mode. Only teachers that are a member of the Domain User Group “LanSchool Teachers” will be able to manage those students.

- **SECURE_MODE**
  When set to a non-null value, the secure version of the product is installed that requires a password be entered on the teacher console.

- **PASSWORD**
  A password is required when turning on password secure mode

- **PASSWORD_CONFIRM**
  Confirmation of the password is required when turning on password secure mode

- **TASK_MANAGER_LIMIT**
  When set to a non-null value, the teacher can decide to limit or not limit Task Manager and Activity Monitor.

- **ENABLECHANNELSELECT**
  When set to a non-null value, the teacher can change channels to view different classrooms.

For example, if you want to silently install a secure mode teacher that can change channels but starts on channel 3, with a password of “test”, your script should look like this:

```
msiexec.exe /i "<path to teacher.msi>\teacher.msi" /qn ADVANCED_OPTIONS=1 SECURE_MODE=1 PASSWORD=test PASSWORD_CONFIRM=test CHANNEL=3 ENABLECHANNELSELECT=1
```
Installing LanSchool Lite v8.0 in a Thin Client environment

LanSchool Lite v8.0 supports a Terminal Server, Citrix or NComputing environment. LanSchool Lite allows thin client computers to be used as student and/or teacher computers. You can mix-and-match thin and traditional client computers (“fat clients”) in the classroom.

Terminal Server Installation

Terminal Server Installation is a two step process. Initially, the TerminalServer.msi installation program needs to be run on the Terminal Server. This will copy all needed files to the Terminal Server but will not configure any Terminal Server client computer as either a teacher or student.

If the Terminal Server is in “Execute” mode, the “After Installation” dialog will appear. Since LanSchool Lite v8.0 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.

Once you have complete this first step and the LanSchool Lite files have been copied to the Terminal Server, LanSchool Lite must be properly configured to run on each desired thin client computer. You may do this on one of three ways:

1. Manual Student or Teacher Configuration
   Login to a thin client terminal with Administrator rights and run the SetupTSClient.exe configuration utility. Repeat this for each thin client device in the classroom.

2. Scripted Student or Teacher Configuration
   You can script the SetupTSClient.exe utility. The following command line options are recognized:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#X</td>
<td>Configures the Teacher channel, where “X” is the desired channel number</td>
</tr>
<tr>
<td>StUdEnT</td>
<td>Configures that thin client device to run the LanSchool Lite Student software at login</td>
</tr>
<tr>
<td>TeAcHeR</td>
<td>Configures that thin client device to run the LanSchool Lite Teacher software at login</td>
</tr>
<tr>
<td>PaSsWoRd</td>
<td>Allows a Security Password to be specified</td>
</tr>
<tr>
<td>UNINSTALL</td>
<td>Configures so that the thin client device will no longer load the LanSchool Lite software</td>
</tr>
<tr>
<td>QUIET</td>
<td>Performs a silent configuration (this must be the last option specified)</td>
</tr>
</tbody>
</table>

3. LskTSDat.ini file
   The previous “Manual Configuration” edits a LanSchool Lite configuration file (C:\Program Files\LanSchool Lite\LskTSDat.ini.) If you do not wish to run SetupTSClient.exe on each thin client, you can edit the LskTSDat.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 Lite Student or Teacher software. The format of the .ini file is as follows:

   [LanSchool Lite TSClient List]
   THINCLIENT001001=Teacher, Channel=1, Name=Teacher1
   THINCLIENT 001002=Student, Channel=1, Name= THINCLIENT001002
   THINCLIENT 001003=Student, Channel=1, Name= THINCLIENT 001003
THINCLIENT 001004=Student, Channel=1, Name= THINCLIENT 001004
DEFAULT=Student, Channel=1, Name=Default

The first part of each line (THINCLIENT001001 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.

The Client Name “DEFAULT” can be used as a default setting. If a Thin Client does not find itself in the LskTSDat.ini file, it will assume the configuration of the DEFAULT entry (if that entry exists.)

NOTE: Some Thin Client devices require configuration to set a unique Client Name for the device. LanSchool Lite requires all Thin Client devices to have a unique Client Name. Please check your Thin Client device's documentation to make sure each device has a unique Client Name.

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

The last parameter defines the LanSchool Lite 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 classroom) you must install LanSchool Lite software on all Terminal Servers and then replicate the completed LskTSDat.ini file to all Terminal Servers. If there are many Terminal Servers load balanced together, it is possible to configure LanSchool Lite to share a common LskTSDat.ini file. Please contact Technical Support for instructions.
Installing LanSchool Lite v8.0 on NComputing Devices

NComputing provides a number of small access devices that connect, either directly or via Ethernet, to a centralized server that hosts each virtual desktop. These devices include the L, M, and X-series computers. Support for NComputing devices is very dependent on the generation of hardware and the version of vSpace software installed. As this support is somewhat dynamic, please check the NComputing matrix on the FAQ page at http://www.lanschool.com/support/faq for the latest news on what combination of hardware model, operating system, and vSpace software is supported with this version of LanSchool Lite.

L and M-Series

The L and M-Series platform allows multiple users to share a single host computer. The client hardware is attached to the host via a standard Ethernet infrastructure. Because of the similarity of the L and M-Series architecture to a standard terminal server, you should first copy the LanSchool Lite files to the L-Series host computer with the TerminalServer.msi package.

X-Series

The X-Series platform allows a single computer to be shared with up to eleven users. Up to 2 X-Series PCI cards are installed in the Host computer. After the software has been installed on all clients of the host, the host should be rebooted and all users should login again. Installation is similar to Terminal Server installation (detailed above.) You must first copy the LanSchool Lite files to the Host computer with the TerminalServer.msi package and then configure the client computers with the SetupTSClient.exe utility.
Installing LanSchool Lite v8.0 in Secure Mode

LanSchool Lite v8.0 has the ability to install additional levels of security if desired. Two modes are available, Password Secure and Active Directory Secure, and one or both may be selected. If the option is not properly installed, however, a Teacher will not be able to communicate on the desired channel and Student access will be unavailable.

Password Secure Mode

This mode requires 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 as teachers.

Installation Steps:

1. After double clicking on either the teacher.msi or student.msi file, continue through the install as previously described. To install the password protected version, check the box to Enable a security mode.

2. Select Password Secure Mode.

3. Type in a password and re-enter it to confirm.

4. Repeat these steps for both Teacher or Student installations.

The password is required on the Teacher install so that if a teacher computer uses the “Become a Student” feature, it can 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 Teacher or Student using a script or Active Directory, refer to the section above, “Scripting or Mass Deploying LanSchool Lite v8.0 via MSI”.

In order to use .adm templates with the secure version of LanSchool, you must login to the customer portal and generate a key that will go in the password section of the .adm files.

In the event that only a Teacher or a Student, but not both, was installed with Password Secure mode, the Student will not be accessible by the Teacher. This will be indicated by a Security Locked Out icon on the Student thumbnail. You can verify if this is the case by checking the version number on the Students. If you hover with your mouse over the icon in the Student system tray, it will show a version number something like:

v8.0.0.20Ls, v8.0.0.20Sd or v8.0.0.20Sds

The lowercase letters are the security identifiers, where s signifies Password Secure Mode and d signifies an Active Directory Secure Mode installation. The uppercase L and S are not actually security identifiers, rather they refer to the type of LanSchool install chosen. L is for the Light version and S indicates a Subscription license. The system is designed to lock out any devices that don’t match security models. The Students will need to be reinstalled with the correct security mode option(s) in order to correct the security lock out issue.

Note: If the teacher’s password is compromised, it will be necessary to re-install both Teacher and Student computers with a new password.
Active Directory Secure Mode

LanSchool Lite v8.0 has the ability to leverage Windows Active Directory to ensure that only authorized teachers can monitor students. This mode adds an extra level of security to prevent unauthorized consoles from being used. This mode will only function in an Active Directory Domain environment and on Windows 2000 or newer systems.

To fully configure this mode, you must have Domain Rights to create and populate a domain User Group.

Installation Steps:
1. After double clicking on either the teacher.msi or student.msi file, continue through the install as previously described. To install the Active Directory version, check the box to Enable a security mode.
2. Select Active Directory Secure Mode.
3. Repeat these steps for both Teacher or Student computers.

To install the Active Directory Secure mode on the Teacher or Student using a script or Active Directory, refer to the section, “Scripting or Mass Deploying LanSchool Lite v8.0 via MSI”.

When in this mode, a teacher must be a member of the Domain User Group “LanSchool Teachers”. If the teacher is not a member of that group, then Active Directory Secure students will not interact with that teacher.

Creation of the “LanSchool Teachers” Domain User Group is done using the appropriate Windows Server 2003 or 2008 Active Directory tools. Once the group has been created, those same tools can be used to populate the group with the appropriate teachers.

While Password Secure Mode requires that both Students and Teachers are installed with this option, Active Directory Mode is a bit different. If the Student has Active Directory Secure Mode enabled, then it will be Security Locked Out to any Teacher who was not installed with the Active Directory Secure Mode enabled (or is not a member of the “LanSchool Teachers” group). The restriction does not go the other way. An Active Directory Secured Teacher (who is also a member of the “LanSchool Teachers” group) will be able to control Students who do not have AD Secure Mode Enabled, without any restrictions.

Note: Active Directory Secure Mode is not available yet for Mac Teachers or Students.
Uninstalling LanSchool Lite v8.0 from a Windows Computer

To prevent the unauthorized removal of LanSchool Lite software, the installation has been designed to be tamper resistant. Rather than using the customary Add or Remove Programs mechanism in Windows, LanSchool Lite requires the presence of the original install package to uninstall the software.

The .msi install package acts like a toggle switch. To uninstall LanSchool Lite v8.0 from a Windows computer, simply double-click the same file you used to first install the product, to run the installation program again. This will remove the software. If you were to select and run the file again, the software would be re-installed.

If the download package is no longer available, you should be able to download it again from your customer account in the Customer Portal. If you are not able to access your account, please contact Technical Support and they will provide you a copy of the .msi file. It will be necessary to know the exact version of the software installed. This can be found in the Student List view of the Teacher console, or locally by hovering with your mouse over the LanSchool Lite icon in the system tray. The version will be something similar to 8.0.0.20 for this release.

If your Students were installed in Stealth mode, the LanSchool icon will not be displayed in the system tray. To determine if a Student is installed in that case, you should just see it listed in the Teacher console. If for some reason it is not listed, but installed, there are two ways to check. If you can access the Task Manager on the student (typically you can do this using Ctrl-Alt-Esc), there will be an entry under Processes called student.exe and then you will know that LanSchool is installed.

If you are unable to access the Task Manager, there is tool available in the Utility folder called Student Diagnostics. If you run this program on a Student computer, the first available test is called “Test Local Installation”. This test will tell you if LanSchool is installed and running as well as the channel number, version and other pertinent data. Please contact Technical Support for assistance in using this tool.

1. If you are on a teacher computer, run teacher.msi. If you are on a student computer, run student.msi.
2. You will be prompted to remove the software, click Next.
3. Click Remove.
4. Click Finish.

To silently uninstall LanSchool Lite v8.0 using a script, run Msiexec.exe with the following parameters:

Msiexec.exe /x “<path to teacher.msi>\teacher.msi” /qn
Msiexec.exe /x “<path to student.msi>\student.msi” /qn
Installing LanSchool Lite v8.0 on a Mac

LanSchool Lite v8.0 has the ability to both monitor and manage students on Mac computers as a Teacher as well as support for Students running on this platform. The installation process on Mac is similar to a Windows installation, but there are slight differences.

Manual Installation

After downloading the LanSchool Lite installation file from the Customer Portal, unzip the file.

To install the software on a teacher computer follow these instructions:
1. Copy lanschool_teacher.dmg from the Mac folder to the Mac Teacher computer.
2. Double click on lanschool_teacher.dmg.
3. Double click on lanschool_teacher.pkg.
4. Follow the installation wizard to the Software License Agreement. After reading the terms of the license, select Continue and Agree.
5. Enter a teacher channel number (1 to 16,000). Choose a unique number for each classroom.
6. If desired, check the box to configure Advanced Options. These options are the same as previously described in the “Scripting or Mass Deploying LanSchool Lite v8.0 via MSI” section. Again these options relate to the case when a Teacher becomes a Student.
7. Click Continue. The installation location cannot be changed. LanSchool Lite must be installed on the system drive.
8. Click Install. The installer will ask for the administrator credentials on that computer. Type in the username and password and click OK.
9. After the installation is successful, click Close.

By default, Teachers are installed without the ability to change their channel. If you wish to allow Teachers to have the ability to change the channel, or to view multiple channels, you must run the EnableChannelSelect utility located in the Utilities folder in the lanschool_teacher.dmg. This toll must be run as root on Mac OS X 10.7 Lion, though administrative privileges are sufficient on earlier OS versions.

To install the software on a student computer follow these instructions:
1. Copy lanschool_student.dmg to the Mac student computer.
2. Double click on lanschool_student.dmg.
3. Double click on lanschool_student.pkg.
4. Follow the installation wizard to the Software License Agreement. After reading the terms of the license, select Continue and Agree.
5. Check the boxes to configure the student as desired. For an list and explanation of the options available, please review the section “Scripting or Mass Deploying LanSchool Lite v8.0 via MSI”.
6. Click Continue. The installation location cannot be changed. LanSchool Lite must be installed on the system drive.
7. Click Install. The installer will ask for the administrator credentials on that computer. Type in the username and password and click OK.

8. After the installation is successful, click Close.

Note: The Mac student install will not work properly when installed from a user account with File Vault turned on. This is an Apple bug that displays “Insert the <username> disk”.

**Automated Installation**

The lanschool_teacher.pkg and the lanschool_student.pkg can be customized and installed through a desktop management application.

To customize this package complete the following steps:

1. Double click on lanschool_teacher.dmg or lanschool_student.dmg.
2. Double click on “Create a custom package”.
3. Follow the installation wizard and select the appropriate options.
4. Name and save the package.

This will create a custom package that can be installed with the selected settings.
Uninstalling LanSchool Lite v8.0 on a Mac

To prevent the unauthorized removal of LanSchool Lite software, the installation has been designed to be tamper resistant. To accomplish this, LanSchool Lite requires the presence of the original install package to uninstall the software, which acts like a toggle switch. Simply select the file to run the same installation program again that you used to install the product. This will remove the software. If you were to select and run it again, the software would be re-installed.

If the download package is no longer available, you should be able to download it again from your customer account in the Customer Portal. If you are not able to access your account, please contact Technical Support and they will provide a copy of the file. It will be necessary to know the exact version of the software installed. This can be found in the About menu item of the software. The version will be something similar to 8.0.0.20.

1. In My Computer, go to the LanSchool Lite product download location and double-click teacher.ms.
   If you are on a teacher computer, run lanschool_teacher.dmg.
2. If you are on a student computer, run lanschool_student.dmg.
3. Click on Uninstall.
4. Click Yes, Uninstall.
5. Type in an administrative username and password.
6. Click OK.
Installing LanSchool on iOS devices

LanSchool provides free Student and Teacher Assistant for the Apple iPad, iPhone, or iPod. The capabilities described below will only work with an existing LanSchool v7.5 or greater environment.

Installation

The Student install is a simple download from Apple's iTunes App Store. The Teacher’s Assistant install is a two step process.

1. From the device, download and install the LanSchool Teacher’s Assistant from the App Store.
2. Pair the Teacher’s Assistant with a LanSchool Teacher’s console running on either a Windows or Mac computer.

Pairing the Teacher’s Assistant with a Teacher Console

Pairing the Teacher’s Assistant with a Teacher Console is a critical step for the following reasons:

- The Teacher’s Assistant will not discover Students unless it is first paired with a Teacher console.
- The settings to restrict students Internet access or limit application usage are read from the Teacher’s Console.

To Pair the iOS Teacher’s Assistant to a Teacher Console

1. Launch the LanSchool Lite Teacher console on a Windows or Mac computer.
2. From the Administer menu, select Manage Teacher’s Assistants. A window will be launched from which the iOS device will be authorized.
3. Connect the iOS device to the organization’s wireless network.
4. Launch the Teacher’s Assistant by clicking on the Teacher icon on the iOS device.
5. The iOS device will discover and list the available Teacher machines on the network. Select the appropriate Teacher machine from the list.
6. A passcode will be generated and displayed on the iOS device.
7. In the Manage Teacher’s Assistants dialog on the PC or Mac, the iOS device will appear in the window. Select the device and click Authorize.
8. Type in the Passcode that was generated on the iOS device and click OK.

Once the Teacher’s Assistant has been paired with the Teacher’s Console, the pairing will automatically occur whenever the Assistant is launched. To stop pairing the iOS device to a Teacher, select the iOS device in the Manage Teacher’s Assistants menu and click Remove.

With the pairing complete, the Teacher’s Assistant will discover all of the Student computers on the Teacher’s channel and download the appropriate feature settings. At this point the Teacher’s Assistant will be able to perform the features even if the Teacher’s Console is closed. However, if the Teacher’s Assistant app is closed, you must start the Teacher’s Console on the Mac or PC before re-starting the Teacher’s Assistant app.
Features

With the Teacher Assistant paired to the Teacher’s Console the Assistant will be able to perform the following features:

- Discover Student computers
- Display a thumbnail of student screens
- Voting
- Send Message
- Details View
  - Last used application
  - Last visited website
  - Battery information
- Student Question

To perform a feature on the student computers you may either select one student, multiple students or all students. To select a student, simply touch their thumbnail. To deselect, touch the thumbnail again. There is an implied all selection if no thumbnails are directly selected.

Once you’ve selected the pertinent thumbnails, touch the icon for the feature you want to enable. To turn off that feature, touch the feature icon again. If you want to configure a particular feature touch and hold the feature icon and a configuration dialog will appear.

Voting

True/False, Multiple Choice or Verbal questions can be sent to the students. Student results are tabulated and shown in real-time to the Teacher’s Assistant.

Send Message

Customized messages can be sent to one, multiple or all students. Select the students or use the implied all by selecting no students and touch the Send Message icon. Input a message or select and existing message and touch the Send button.

Details View

To view the details about a student such as their battery information, last used application and last visited website, tap a thumbnail twice.

Student Question

Students can raise their hands electronically by clicking on the LanSchool icon on their computer and typing in a question to the teacher. That question is then displayed on the Teacher’s Assistant.
Installing LanSchool on Android devices

LanSchool provides a free Student for Android tablets and smartphones. The capabilities described below will only work with an existing LanSchool v7.7 or greater environment.

Installation

The Student install is a simple download from Google Play Store. From within the Android device, login to the Google Play store and then download and install the LanSchool Student.

Features

The following features are available with the LanSchool Android Student:

• View Android student thumbnails in the teacher console
• Receive a “Show Teacher” screen broadcast
• Receive a message from the teacher
• Receive tests administered by a LanSchool Teacher
• Ask the teacher a question
• Respond to a real-time vote
• Can change classroom channel
• Gather Inventory Information
  • Current application running
  • Network information
  • Battery information
Running LanSchool Lite v8.0 in Kiosk Mode

In LanSchool Lite v8.0 you can run the Teacher Console on Windows in Kiosk Mode. This mode makes the LanSchool Lite console so it cannot be minimized or terminated.

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

1. On the teacher computer, install the LanSchool Lite teacher
2. Open regedit.exe
3. Browse to HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Run
4. Add KiOsK to the LanSchool Lite Teacher Key
   C:\Program Files\LanSchool Lite\Teacher.exe KiOsK
5. Click OK

The next time the system is rebooted, the LanSchool Lite Teacher Console will run in Kiosk Mode.
**Configuring LanSchool Lite Preferences**

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

The available configuration tabs are:

- Network

**Network**

The Network tab lets you configure the following preferences:

**Data Transmission**

**IP-Broadcast**

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

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 Lite data to students via TCP/IP-Multicast. Multicast allows networking hardware to keep LanSchool Lite traffic local to LanSchool Lite 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 Lite 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 Lite will always use the “first” NIC, but that is not always the desired NIC or network. You can use this check box to specify which NIC to use.

If your teacher computer has multiple real or virtual network adapters, specify the adapter that LanSchool Lite 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.
Listed below 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 Administrator, then Change Student
Channel...

Administrator Channel
Channel “0” (zero) is the administrator channel and will have the ability to monitor all channels.

Use Multiple Channels
This feature allows the teacher 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.

- Uninstall and re-install the product, selecting a new channel
- On Windows, run setchannel.exe, which is located in the Utilities directory
- Change the channel from the LanSchool Lite console. If EnableChannelSelect.exe has been
  run, it is possible to change the student channels from the console.

1. Select the computers
2. Click Administrator, click Change Student Channel...
3. Select the new channel
4. Click OK.

- Set the channel with student.adm using Active Directory

Note: LanSchool Lite works well with imaging tools such as Ghost. The key consideration when
using an imaging tool is how to change the channel for all of the computers in a particular
classroom. For large organizations, the recommended method is to use Active Directory or
setchannel.exe through a login script. Smaller organizations may find it easier simply to change
the channel through the Teacher console.
To update LanSchool Lite with a new version, simply run the new teacher installation files. It will automatically update the LanSchool Lite files. As long as the original LanSchool Lite 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.

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

1. Begin by reinstalling the latest build of LanSchool Lite onto the teacher computer.
2. Copy the `student.msi` and `pcupdate.zip` files to the LanSchool Lite Install folder on the teacher’s computer (the default folder is `C:\Program Files\LanSchool Lite on Windows` or `/Applications\LanSchool Lite on a Mac`).

Note: If you are using Deep Freeze or 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.

3. In the LanSchool Lite console, select the computers that you would like to update.
4. Click `Administer` and then `Update LanSchool Lite on Selected Students` menu option.

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

5. When deploying students through `Update LanSchool Lite on Selected Students` menu, the settings that are pushed out to the student are the same as the `Advanced Options` set during the Teacher install.

Note: This method will only work if there already is a v6.5 or newer student running on the student computer. This method cannot be used to upgrade a v6.2 student to v8.0 student. Upgrading from v6.2 to v8.0 requires a reinstall of the software.

1. Begin by reinstalling the latest build of LanSchool Lite onto the teacher computer.
2. Copy `mupdate.zip` from the Mac directory to the LanSchool Lite Install folder on the teacher’s computer (the default folder is `C:\Program Files\LanSchool Lite on Windows` or `/Applications\LanSchool Lite on a Mac`).

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.

3. In the LanSchool Lite console, select the Macs that you would like to update.
4. Click `Administer` and then `Update LanSchool Lite on Selected Students` menu option.

This will take a few seconds for every student selected. When it is done, you may have to click the `View`, then `Refresh (F5)` menu item to see the newly installed version on the Macs.
LanSchool Lite Security Monitoring

With a tool as powerful as LanSchool Lite, 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 three ways to deal with possible misuse.

1. Set school policies around appropriate behavior, monitor and enforce the policy.

2. Install LanSchool Lite v8.0 in Active Directory Secure Mode which requires teachers to belong to a domain group called “LanSchool Teachers” in order to manage student computers. (Recommended method)

3. Install LanSchool Lite v8.0 in Password Secure mode, which requires a password.

Security Monitor

Security Monitor is also available in the utilities folder on the LanSchool Lite download image. This application runs on any PC and will capture a log of LanSchool Lite activity, including the installation or un-installation of the LanSchool Lite program.

With this utility, many schools have quickly been able to pinpoint students who are abusing the “appropriate use policy” of their classroom. There is a LanSchool Utilities.pdf file in the same folder which describes this utility in detail.

Teachers can also access the Security Monitoring data by clicking View then Status Window. As soon as teachers perform actions you will see the security messages.

Students downloading and installing a demo version of LanSchool Lite caused the largest security problem with the previous versions. Starting with LanSchool Lite v6.1, the demo version cannot interact with the released version.
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 Lite v8.0 in a NAL environment, push out both the teacher and student programs using the supplied .msi files.

Note for Teacher computers:
If the teacher’s computer is also locked-down by NAL, the teacher will not have a System Tray and will not be able to click the LanSchool Lite Teacher Icon to control LanSchool Lite. Instead, the hot-key sequence “<Ctrl><Alt><L>” can be used to bring up the LanSchool Lite Teacher’s menu.
802.11 Wireless Support

LanSchool Lite v8.0 includes a wireless protocol that is automatically selected when the Teacher computer senses that it is communicating over a wireless network. This protocol significantly increases the performance of LanSchool Lite on wireless networks.

Special Hardware Requirements

1. 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.

2. Enterprise Class Access points are recommended. 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 Aruba Instant 135. Similar products are produced by HP, Dell, Cisco or IBM.) This will benefit not only LanSchool Lite, but general student computing as well.

3. Turn off power save on the student computer’s NICs. In our testing we’ve found that LanSchool Lite performance is improved as well as the battery life of the computer.

Installation

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 installation programs 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 100Mbits 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 Lite Show Teacher 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 vendor to vendor, 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 Lite Utilities

SecurityMonitor.exe
If you suspect a student has a rogue copy of LanSchool Lite, you can quickly identify that student with the new LanSchool Lite Security Monitor. The LanSchool Lite Security Monitor will capture all traffic and optionally save the data out to a log file. Click the Options button, select the logging tab and type in a filename.

Clicking on the options button also allows you to filter by teacher and by message. This new filter capability allows you to sift through all of the messages to just find the inappropriate use. If you find a rogue teacher console is in use, you can show Real-time Alerts by selecting that computer. At that point, all traffic from that computer is flagged with a warning sign.

EnableChannelSelect.exe
By default, a teacher cannot alter the settings in the Teacher Channel area of the Network tab of the Teacher Preferences dialog. This information is set during installation and generally does not need to be set. However, if a teacher does need to change these settings, running this utility on the teacher’s machine will then allow that teacher to update her local channel, groups, and remote student channels. This utility must be run with local Administrator privileges. If you have need to revoke these rights, you can run this utility with the “FALSE” command line option.

DisableAudio.exe
By default, a teacher can use the audio capabilities of LanSchool. If you do not want a teacher to be able to use the audio settings you can run this utility (DisableAudio.exe TRUE) on the teacher’s machine and it will make it so the speak\audio section will be grayed out and disabled.

You can set it back to the default by running DisableAudio.exe FALSE.

DisableDataTransmission.exe
By default, a teacher can alter the settings in the Data Transmission area of the Network tab of the Teacher Preferences dialog. If you do not want a teacher to change the Data Transmission settings you can run this utility on the teacher’s machine and it will make it so the Data Transmission section will be grayed out.

You can set it back to the default by running DisableDataTransmission.exe FALSE.

DirBCastAddr.exe
When configuring the Teacher preferences, the Network tab allows for up to 3 different “IP-Directed Broadcast” addresses. These are special addresses which (when properly formed) will traverse your network as a single directed UDP packet until the destination subnet is reached. Upon reaching the destination subnet, the router will then convert the packet into a standard UDP-Broadcast packet.
For this to function, the routers must be configured to forward IP-Directed Broadcast packets (sometimes routers refer to these as “UDP Directed Broadcasts”) and the address of these packets must be properly formed. This utility will help with the later. You must enter the IP address of any student machine on the target subnet along with the subnet mask for that subnet. After both addresses have been entered, click on the “Calculate” button. Copy the resulting address into one of the three Subnet entries in the Data Transmission area of the Network tab of the Teacher Preferences dialog.

**LSeries.bat**

This file is used with all NComputing U and L-Series devices. The installation manual explains its use.

**LSeriesLocation.exe**

This utility will display the local Client Name of a U and L-Series NComputing device. It can be used to verify the proper setup of an NComputing U and L-Series device as explained in the installation manual.

**SetChannel.exe**

The Teacher Channel is generally set during installation. The LanSchool Lite software can always be re-installed to update the local Teacher Channel on a student or teacher machine. This utility can also be used to update that local Teacher Channel. It must be run with local Administrator rights. On a Teacher machine, it can also be used to group channels together. It is a console application. All parameters are passed on the command-line. The new Teacher channel must be a number between 0 and 16000. (Note that channel 0 has no real use for a Student machine.) If the machine is a Teacher machine, you can specify a group of channels by enclosing the comma separated channels within brackets. (i.e. \{1,4,63\}) SetChannel.exe also accepts a special -TC command line parameter to allow you to change the channel on a PC Tech Console.

**SetDataTrans.exe**

This will alter the base data transmission type on a Teacher machine between IP-Broadcast, IP-Multicast, and IP-Directed Broadcast. As a console application, the parameters are passed on the command line. They are “Broadcast”, “Multicast”, or “Directed:w.x.y.z,w1.x1.y1.z1,...”. For IP-Directed Broadcasts, you can specify up to 4 dotted-decimal IP-Directed Broadcast addresses. You can use the DirBCastAddr.exe utility to properly form these addresses.

**StudentDiagnostics.exe**

This is a diagnostic utility used by LanSchool Lite technical support personnel. It is generally used to detect network connectivity issues involving firewalls and routers.

**StudPopUp.exe**

If the student or teacher computer does not have a system tray (it is possible to remove the system tray with Group Policies or with Novell’s NetWare Application Launcher) there will be no way to access the local LanSchool menu. Running this app will bring up the local LanSchool Lite menu.
SwitchToTeacher.exe

While the Teacher console has an option to switch functionality to that of a Student, there is no easy way for a Student machine to switch to the functionality of a Teacher machine. This utility will provide that option. For this to function, you must first install the Teacher software on that student machine and then over-install the Student software. Running this utility will stop the local Student application and launch the Teacher application.

WakeUp.exe

The LanSchool Lite Teacher console can issue a Wake-On-Lan packet to wake up specified student computers. For this to work, the student computers must be configured in their BIOS to all for a remote wake-up. Unfortunately, all computer manufacturers seem to set these BIOS settings in a different way. This utility is used to verify that a particular machine has been setup properly. It will take the MAC address of the target computer as a command-line option. For example, if the MAC address of a target student machine were 00-22-64-AD-9C-AC, you could use WakeUp.exe to “wake-up” that machine with the following command line: WakeUp.exe 00-22-64-AD-9C-AC [Enter]
How LanSchool Lite Works

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

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

The best way to set up LanSchool Lite in a lab, classroom or wireless laptop cart is for each classroom or room to have its own Teacher channel. This setup enables all of the computers in the same classroom to interact with each other and the teacher to manage the entire room.

If LanSchool Lite is going to be used in a 1:1 environment, where every student has a notebook there are two options:

1. The recommended option is for teachers to create a Class List and then automatically bring those students into class.
2. Another option is to have the students join the Teacher’s channel. In this mode, 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 class list.

Most schools choose the first option because it allows them to start the class more quickly than the second option. If you decide to use Class Lists, there are three ways to implement this.

Implementing Class Lists

For each of the three Class List methods, determine your channel assignment first.

1. Setup all student computers with a default “home” channel which is not used by any teachers. For instance, in a middle school you could assign the 7th graders to channel 7, 8th graders to channel 8, and 9th graders to channel 9. Alternately you could assign a single channel to the entire student body.
2. Setup each teacher on their own unique channel. Using the teacher’s classroom number works well for many schools.
3. Install the student computers with the default option not to change channels.
4. Create a Class List by one of the three methods below. These lists can be created based on either the student Login Name, their Machine Name, or in Windows you can choose to use their Active Directory (AD) Name.
5. In the Teacher console, load the appropriate Class List. This will “pull” students from their home channel temporarily to the channel the teacher is on.
6. Dismiss the class. When the current class is dismissed, all students in that group will be assigned back to their home channel. Forgetting to actively dismiss the class is not a problem however, as another teacher will be able to pull students to their channel when loading their own Class List.

Create a Class List manually

1. From the Administer menu select One to One and then Manage Class Lists.
2. Determine how you would like to select students and choose the appropriate radio button. You may choose to find students by one of the following methods:
• Student Login Name
• Student Machine Name
• Student Name (from Active Directory in Windows environments)

3. Click the Browse for Students button.
4. Check off the appropriate students for this class and select Add.
5. If desired, Browse to associate a previously created Profile with this class.
6. Save the class by entering a name. Class Lists are saved with an .lsc extension.

The class may now be loaded on demand. This will cause the current Student List in the console to be replaced by the students in the saved file.

Create a Class List from a static file
1. Create a .csv file that lists the students by either:
   • Student Login Name
   • Student Machine Name
   • Student Name (from Active Directory)

   An example of what this file might look like for Login Names:
   Student01
   Student02
   Student03...

From the Administer menu select One to One and then Manage Class Lists.
2. Select Import Students...
3. Select the .csv file that was previously created.
4. If desired, Browse to associate a previously created Profile with this class.
5. Save the class by entering a name. Class Lists are saved with a .lsc extension.

The class may now be loaded on demand. This will cause the current Student List to be replaced by the students in the saved file. You can later Dismiss Current Class from the same menu location.

Create a Dynamic Class List from your Student Information System (SIS)

Because of the number of different student information systems that exist, LanSchool Lite has chosen to take a more generic approach to our integration with these tools. Generally these systems provide a mechanism to export data like the Student Name for example, and to schedule that data export on an ongoing basis.

To prepare for implementing Dynamic Class Lists, you will need to create two files by exporting the required data from your SIS software. The first one is the Teacher file. It should contain only three columns of data, separated by commas. Your tool should have an export option to save as .csv, but if not, a plain text file is also acceptable.
The data needs to be listed in specific order by row: Teacher name, Class ID, Class Name with these items separated by commas. The Teacher name can be either their Network Login Name, their Machine Name, or in Windows environments with Active Directory, their Student Name. The Class ID number can be any numeric identifier, it just needs to be unique for each class.

The second file you need is a Student file. The Student file needs to include only two columns of data separated by commas: ClassID and Student Name. The Student Name can again be their Login Name, their Machine Name, or in Windows environments with Active Directory, their Student Name.

Each of the two files must be named as follows (case sensitive):
“ClassesByTeacherLoginName.csv”, “StudentsForClassByLoginName.csv”,
“ClassesByTeacherMachineName.csv”, “StudentsForClassByMachineName.csv”,
“ClassesByTeacherADName.csv” or “StudentsForClassByADName.csv” depending on the method you chose to export the data for the Teacher or Student name.

Once you have exported this data to the files and named them appropriately, copy them to any network location that your Teacher machines can access. Most SIS tools allow you to schedule this kind of data export, but if not it would be easy to setup a cron job to export and copy this data to the file share as often as you like.

To use these files with LanSchool Lite, after installing the Teacher then launch the console. The steps to load the lists are the same on Windows and Mac with one exception. The Load Dynamic Class List menu item must be enabled in the Windows console with a utility provided in the Windows folder in the install download image. Simply copy the file ADClassListShimCSV.exe to the location of the Teacher install (typically C:\Program Files\LanSchool Lite) and its presence in the folder will enable this menu item.

1. From the Administer menu, navigate to One to One and select Load Dynamic Class Lists.
2. Browse to the location where you saved the Teacher and Student .csv files.
3. Select the class and students you wish to load.

You can later Dismiss Current Class from the same menu location. The console will always check these files for changes so new students coming in or teachers changing classes will be handled automatically.
Using the Teacher computer

The use model for LanSchool Lite v8.0 is quite similar to previous versions. On the teacher computer, you will see a small LanSchool Lite icon (that looks like a small green circle of circles) in the system tray. The system tray is located in the bottom right corner of your computer screen. You will use this menu to control the key features of LanSchool Lite. On a Mac, the LanSchool Lite menu can be accessed on the dock icon.

More advanced features are available when you access the LanSchool Lite Teacher console. The console can be accessed by “left clicking” on the LanSchool Lite system tray icon or dock icon.

In the console the key features are available as icons on the toolbar. All of the features can be accessed through the menus. It is also possible to right mouse click on computer thumbnails to access the key features.

When selecting computer thumbnails we recommend using `ctrl-a` to select all computers or hold down the `ctrl key` and click with your mouse to select a group of computers. On the Mac use `command-a` to select all computers. In the thumbnail view you can select multiple computers by just selecting them with the mouse.

When using the toolbar buttons, a single click enables that feature and presses the button. Another click will disable that feature.

It is possible to have multiple teacher consoles monitor the same classroom. However, only the first teacher’s action on a computer will take effect.
About the Student computers

LanSchool Lite is set up to run in the background on student computers. Students will automatically be discovered by the teacher on their channel.

**LanSchool Lite Student Icon**

A LanSchool Lite icon (green circle of circles) appears in the system tray at the bottom right corner of the computer screen in Windows. On the Mac it appears as a small icon at the top of the screen. If you place your cursor over the icon, it will tell you which teacher channel the computer is on.

If a student single clicks on this icon they can request help from the teacher. The student can type a question and a small question mark is displayed in the teacher console indicating that student has a question. The question mark goes away when the teacher chats with the student or uses the menu item *Clear Student Question*.

If a student right clicks on this icon, it will bring up the student file folder where the Send/Collect files feature sends files.

**NOTE:** If you selected the option to allow students to change their channel during the installation of the LanSchool Lite Student application, the students will have a menu option to select a channel they wish to join.
User Interface Tips

LanSchool Lite was designed to be simple and easy-to-use. Most of the features are accessible from the LanSchool Lite system tray menu or dock icon. The more advanced features are available in the LanSchool Lite Teacher console.

All of the features are grouped under one of five menu items: Demonstrate, Monitor, Restrict, Administer, View

LanSchool Lite Toolbar Buttons

To use a feature in LanSchool Lite, select the individual student or students and press the LanSchool Lite Toolbar button that corresponds to the feature that you want to use. At that point the button will depress and change to a lighter color. To stop using that feature, click the button again.

Some of the LanSchool Lite Toolbar Buttons have a little arrow to the right of the button. Click on the button to access additional options for that feature.

Buttons can be added, removed or moved by click on View then Configure Toolbar on a PC or Customize Toolbar on a Mac.

Right-mouse click

In the LanSchool Lite Teacher console you can access advanced features by right-mouse clicking on a student computer in either the Details or Thumbnail view.

Multiple Select

It is possible to select one, several or all students.

To select multiple students, use the standard Windows ctrl click method. You can also select the entire list with the ctrl-a key sequence. On the Mac use command-a to select all computers.

In the details view, the line will turn blue when selected. In the thumbnail view, the thumbnail will have a thick red line surrounding it. It is not necessary to use the Windows ctrl click in the thumbnail view. In the thumbnail view you can select multiple thumbnails by clicking on another thumbnail.

Once you have selected the desired students, you can right-click on the selected students and get an advanced options menu, click on the toolbar button or console menu.

Unselect Students

To unselect students, click on a blank area of the console.

Implicit ALL Selection

If no students are selected, there is an implied all selection when activating key features like Blank Screens or Show Teacher. For example, if no students are selected you can click the blank screens toolbar button and all of the student screens will be blanked.
Refresh Screen

Pressing F5 on a PC or command-r on a Mac or the menu item View -> Refresh will refresh the console by initiating a re-discovery of student computers on the channel.

Sorting

By default, the detail view is sorted alphabetically by the Login Name column. If you click on the any of the other column headings, the list will sort on the selected column.

LanSchool Lite System Tray Menu or Dock Icon Menu

A right mouse click on the LanSchool Lite icon in the system tray or dock icon will bring up a menu that contains the features that most teachers use every day.

A left mouse click on the system tray icon will stop the action that you are doing to the students and bring up the LanSchool Lite Teacher console.

Hotkey for the LanSchool Lite Menu

Some teacher PCs do NOT have a visible task bar. Since it would not be possible to click on the non-visible icon, you can bring up the LanSchool Lite Teacher's menu with a ctrl+alt+l. (The “l” stands for LanSchool Lite)

Selected Only

In thumbnail view you can just watch a few machines by selecting those machines and pressing the Selected Only menu beneath the arrow on the View All button.

Classroom Layout

Classroom Layout allows you to arrange the thumbnails in the shape of the classroom. A classroom layout is automatically saved for each size of thumbnails. To switch to classroom layout view, click the arrow to the right of the View All button and select Classroom Layout.

Snap to Grid makes it easier to align thumbnails when in Classroom Layout view. Lock Layout, makes sure the layout stays the same once you’ve set it.

Show Tooltips

Show Tooltips will either Show or Disable tooltips in the thumbnail view.

Magnify Thumbnails

The magnify menu on the View All button turns on or off the ability to hover over a thumbnail and have it expand temporarily to a larger size.
LanSchool Lite Feature Overview

View Thumbnail Mode (Monitoring)
You can view up to 3000 crisp, high color student thumbnails at the same time. Every student’s screen will appear as a “thumbnail” in the LanSchool Lite console. There are four sizes of thumbnails that can be sized automatically to the best fit. You can choose to only view selected students by clicking on the View All button, then checking View Selected.

Classroom Layout
Thumbnails can be arranged in the shape of the classroom. Each size thumbnail has its own layout that is automatically saved. Classroom layouts can be saved loaded and locked.

Magnify Thumbnails
When you hover over a thumbnail, the thumbnail size will quickly increase. If you do not like this feature, it can be turned off by clicking on the View All button then removing the check from the Magnify option.

Active Application/Website Icons
In the upper corners of the thumbnail you have the option of seeing an icon of the active application and website.

Notebook battery monitoring
LanSchool Lite monitors the battery state. If the charge drops below 50% a yellow warning battery icon is displayed. If the charge drops below 20% a red critical battery icon is displayed. The percentage remaining and A/C status is available from the Properties menu.

Secure Mode
LanSchool Lite can be configured to require a password to access the console. This password must match the password that was entered during the secure student install.

Anti-tampering controls
LanSchool Lite makes every attempt to prevent students from mischievously “unload” the software or disrupt the classroom.
**Student Question**

Students can click on the LanSchool Lite icon and type a question to the teacher. A question mark appears on their machine or thumbnail. In the Details view you can see the student question in the ‘Last Question’ column. In the Thumbnail view you can see the student question by moving the mouse over the thumbnail image which displays the question in a tooltip. The question mark can then be cleared by the teacher.

**Security status monitoring**

The LanSchool Lite Security Monitoring tool can now be accessed by clicking View Status Window. This feature shows all LanSchool Lite traffic so that you can identify unauthorized LanSchool Lite activity. You may also launch the new SecurityMonitor.exe, found in the Utilities folder on the product download, to log all LanSchool Lite activities to a file and filter those message based on type and teacher.

**NetWare Support**

If the computer is a using the NetWare client software, LanSchool Lite will use the NetWare login name instead of the Microsoft login name.

**Multicast support**

One of the benefits of using TCP/IP is the availability of Multicast. Multicast allows networking hardware to keep LanSchool Lite traffic local to LanSchool Lite computers and cross subnets. Because some network routers or switches don't support Multicast, this option is disabled by default, but can easily be enabled.

**Channel Grouping**

The teacher can group and control any specific channel and can now group any number of channels together and control all of these channels simultaneously.

**View Only**

This feature allows you to supervise a selected student machine. While supervising, you will see everything the student is doing, but will not be able to control that student’s keyboard and mouse.

**View All**

This will show all computer screens in the classroom as a Small, Medium, Large or Extra Large thumbnails. These views will be updated every few seconds. As you move your mouse over a thumbnail image, the student’s login name and computer name for that image appear in a tooltip.
If the student has a question you will also see that question in the tooltip. If you hover for about a second the thumbnail will get larger. If you right-click a thumbnail view, you will get a menu of options to control that student.

**Refresh List**

By selecting this option or using the shortcut key, F5 on the PC or “command+r” on the Mac, you can refresh the list and see any new students that might have entered the class.

**Update LanSchool on Selected Students**

This option can be used to quickly install a new version of LanSchool Lite Software on selected student machine. The options you chose when installing the Teacher are applied to the Student when performing this remote update.

**LanSchool Lite Properties Page**

The properties page is a useful troubleshooting tool if you need to know what teacher is taking action on a particular student. It also shows the amount of power remaining in the battery and its A/C status.

**Toolbar Configuration**

The toolbar can be customized through the menu View -> Configure Toolbar. On the PC, it can also be configured by holding down the “alt” key while dragging the buttons to a new location or removing them by dragging them off the button bar. You can also reset the toolbar back to the default in the Customize Toolbar window.

If there are more buttons on the bar than you can see, they can be accessed through the “>>” chevron button on the upper right corner of the toolbar.

**Student Name from Active Directory**

LanSchool Lite normally displays the Windows or Novell login name. Now if the Student Display name is available in Active Directory, that Display name is displayed in the Login Name column.

**Preferences**

Enables you to configure how LanSchool Lite works.

NOTE: The system administrator who set up LanSchool Lite on your network most likely optimized these settings during installation. You may want to consult with that person before making any changes to the custom preferences.