User Guide

7.2.8

Introduction

What is AB Tutor?

AB Tutor is a networked classroom, instruction, monitoring and teaching tool that lets you train students in a networked classroom or lab, simply, effectively, at a very affordable price. Teachers, trainers and administrators can use the software to easily control, manage, monitor and support their students.

This is a list of the key features of AB Tutor

Cross platform

- Windows, Mac and Linux tutor applications
- Windows and Mac client applications

Broadcast and share

- Broadcast tutor screen to students
- Show static, locked, screen to students
- Show a student's screen to others
- Annotate live demo
- Record tutor screen and audio for lesson playback

Monitor

- Simultaneous watch by multiple tutors
- Network efficient sizeable thumbnail views, with changeable refresh times
- Real-time remote screen watch
- Create different thumbnail tab view for each group
- Monitor running applications and files
- Identify what site/file the student is working on
- Monitor and log student activity (applications, printing, websites and keystrokes)
- Take time and name-stamped snapshots of student activity
- Record and play back student screen activity

Violation notification

- Inform tutor when specific keywords are typed
- Automatically take snapshots of violations
- Option to launch remote screen recording upon violation
- View all violations, screenshots, user details and context
- Notify teacher if student visits specified sites

Remote Control

- Take over remote mouse and keyboard
- Share control of applications with student
- Launch and close down applications remotely
- Automatically launch websites or open files remotely
- Set policy to immediately prevent application from running
- Lock remote screen, keyboard and mouse, with option to blank screen
- Create customised lock screen messages (for lesson plans)

Classroom Management

- Power up remote machines
- Remote logon
- Remote logoff and shutdown
- Schedule remote shutdown
- Block printing
- Auto-connect to computers
- Auto-connect when connection lost
- Create defined classroom groups of computers and/or users
- Automatically apply different policies to different groups of users
- Import computers and users from active directory
- Either connect to all clients or only to pre-set groups

Internet Control

- Block ports to prevent any Internet activity
- Limit web browsing to specified sites
- Black-list specific sites
- Filter by keyword/wildcard

Application control

- Limit applications that can be launched
- Specify applications that cannot be run
- Close down inappropriate applications

Communication

- One-to-one and one-to-many text chat
- One-to-one and one-to-many audio chat
- Broadcast text messages

Polling and examination

- Create + distribute one-question polls to remote computers
- Results of poll collected in real-time
- Create and distribute more complex exams to remote computers

File management and distribution

- Distribute files to student machines
- Collect files from students
- Remote file management

Administrative tools

- Detailed inventory of remote hardware/software
- View and manage remote services and processes
- Administer remote machines via command prompt

Optional privacy setting

- Inform users when AB Tutor is running
- Let users know when they are being watched
- Allow user to block a watch

Introduction

Requirements - Workstation/server environment

⚠️ As AB Tutor is a complex piece of software, we cannot guarantee that it will work perfectly with every possible configuration of hardware, software and security. For this reason, we recommend that you trial AB Tutor for 30 days to check that it is compatible with your environment. Please contact support@abtutor.com if you encounter any issues at all during the trial period.

Operating system:

- ⊞Microsoft Windows XP, 2003, 2008, Vista, Windows 7
- Mac OSX 10.6 (Leopard) or newer

ℹ️ No special requirements are necessary to run the AB Client in a Windows Terminal Server environment. Any system that supports normal Windows Sessions is supported (e.g. Citrix, nComputing)

Network and access:

- TCP/IP and UDP network protocol running Windows Sockets 2.0, using static or dynamic IP addresses
- TCP and UDP port 5151and an alternate port, 5152, must be available and not blocked by firewalls etc. (See Appendix II)
- Multicast option enabled in all routers and firewalls if computers are situated on different subnets and if you want to connect over a wireless network.
- Unrestricted access to the Internet for registration and licensing. You must make sure the domain name www.abtutor.com is not blocked and that you do not allow any filters to restrict access to this site.

Introduction

Pre-installation checks

There are a few pre-installation checks you should run through before you install AB Tutor to make sure that the software runs correctly:

1. For installing, activating the software and for setting and changing passwords you need administrative rights on the tutor and the student computers.
2. You have details of all filtering, policy setting, security, firewall and virus protection software (including windows firewalls and windows Defender) running on your computers and you know how to configure these to allow software to work through them. You need to set up these programs to allow communication via TCP and UDP on ports 5151 and 5152).
3. You have got an open Internet Connection on the tutor machines (this is required for software activation and licensing). If you do not allow the tutor machines access to the internet, please contact support@abtutor.com for information on activating AB Tutor without connecting to the Internet.
4. If you connect to the Internet via a Proxy Server, do you have details of that server and the port through which it connects? (Ideally you need to be able to create a special AB Tutor Account to allow the software to connect to the Internet through your proxy server. That way you can hardcode these settings into the tutor program and not use each teacher proxy server details)
5. There is a working network connection between the computer on which you want to install the tutor program and the client/student machines you wish to monitor.
6. You have details of any software such as Deep Freeze and know how to exclude files/folder and registry settings from being re-set by such software.

Introduction

Installation Planning

AB Tutor has a number of powerful features, and we would recommend that you spend some time planning how it will be deployed. You need to think carefully about where the software will be installed, the level of access you wish to give to different sets of users, and whether you wish to limit access to specified groups and functions.

You may find it helpful to run through the following questions in your planning:

Should you install the client program on the computers running the tutor console?

It is often useful for an administrator to be able to connect to and remotely maintain a machine running the AB Tutor program. For that reason, we recommend that you install both the tutor and the client program on the tutor machine. However, if you do so, you will need to make sure that you open up port 5152 as well as 5151.

You may experience problems when "Scanning" your network for computers if the client program is also installed and running. If you connect to classroom groups and not the "find <all>" group, then running the tutor and client on the same machine will not be a problem.

We strongly recommend that you do not install the tutor and client program by default on all client computers as this could pose a security risk if students get easy access to the tutor program.

What can AB Tutor do?

Carefully look through the features that AB Tutor offers - make sure you understand the power of the software.

Who do you want to allow access to AB Tutor and what features should they be allowed to use?

We would recommend that you do not allow all staff administrative rights to AB Tutor. Instead, we recommend you do the following:

- create classroom groups
- set restrictions on each of these groups - these restrictions will determine what functionality is available to anyone who logs on with tutor level access (you may choose to disable the policy manager for tutors, and only allow them to apply policies that you have created.)
- create policies that you wish to be available to tutors
- finally set different tutor and admin logon passwords

What groups should you divide your network up into?

Unless you have groups created, Tutor users will be unable to see any of the machines on the network. Administrators will potentially have access to all machines, and it will not be obvious which machines are in which classroom. We strongly recommend that the administrator user is only available for setup and administration and that only the tutor user is available for normal operation.

Instead of giving every tutor access to all the computers in the school, we recommend that on

each tutor program you set up a group which corresponds to the computers to which that computer will need to connect. So, in a typical installation, you may have a classroom with one tutor machine and, say, three clients. We would recommend that you set up a classroom group for that classroom, and then protect the installation with a log-on password. That way, anybody who launches AB Tutor, with tutor access only, will only be able to see and connect to computers within that classroom.

This also prevents teachers inadvertently breaking the software and allows the administrator to slim down and simplify the interface for them through the use of group restrictions.

Installation

Installation on Typical School Architecture
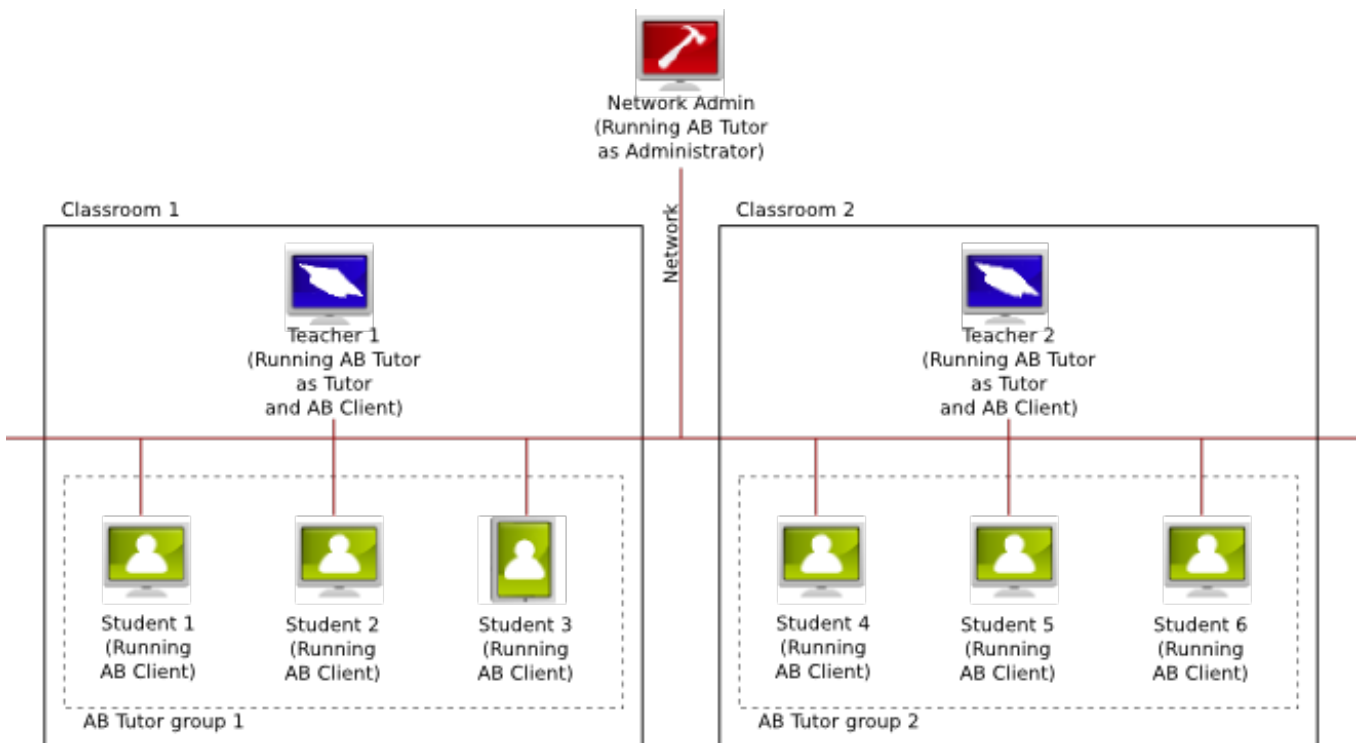
- Install AB Client on all student machines in classroom 1.

- Install AB Tutor and AB Client on the Teacher's machine in classroom 1 (Teacher 1).
- Launch AB Tutor on Teacher 1.
- Create a new group called **Group 1** and add all workstations in the classroom to it (e.g. Students 1 to 3).
- Set the Administrator and Tutor passwords on Teacher 1.
- Give the Tutor password to all teachers who will use classroom 1.
- When the teacher logs in on Teacher 1, they will only be able to connect to workstations in that classroom (i.e. Students 1 to 3)
- Repeat the above in classroom 2, running AB Tutor on Teacher 2.
- The administrator's workstation will have the ability to connect to all workstations on the network, including the Teacher machines if the client program has been installed on them.

Installation - Windows

Download and Install

Download the AB Tutor install file (abtsetup7??.exe where ?? represents the sub-version) from www.abtutor.com. This single install file is used to install both the client and the tutor programs. The trial version that is available for download is a fully working but time-limited copy of the program. If you decide to purchase AB Tutor, you will not need to uninstall and re-install the software. You will simply need to activate the trial version with an activation serial number.

If you already have an account with AB Tutor, you can log into your account in the licence management system to download the most up-to-date file for the software version you have purchased. Use the 'Download' button in the top menu bar.

There are four steps you need to run through to get AB Tutor up and running:

1. Start by installing the tutor program
2. Next, install the client programs
3. Configure your setup to allow AB Tutor to work
4. Activate the tutor (but not client) software

As of version 7.1.0, the software can be pushed out to clients (and subsequent tutors) using the included Remote Deployment Utility. This is an alternative to pushing it out through Active Directory and can make large installs much simpler.

Install the tutor program

Before you start, make sure that you have got Administrator rights on the computer on which you want to install the tutor program. We recommend that you close down all running applications before installing.

Locate the AB Tutor installation program file (abtsetup7??.exe) you downloaded previously. Double-click it to start installation and follow the simple on-screen instructions.

After agreeing to the licence agreement and specifying the install location, you will be asked to specify whether you are installing the **AB Client** (Student), **AB Tutor** (Teacher) program or both. AB Tutor consists of two separate programs:

The Tutor or Control program
This component should be installed on workstations which will be used to connect to and control other workstations (e.g. the teacher's or network administrator's machine only).

The Student or Client program
Install this component on workstations that will be remotely controlled, usually the student workstations. By installing this component on a workstation, you are allowing a tutor machine to connect to, control and monitor that workstation.

Select the AB Tutor option.
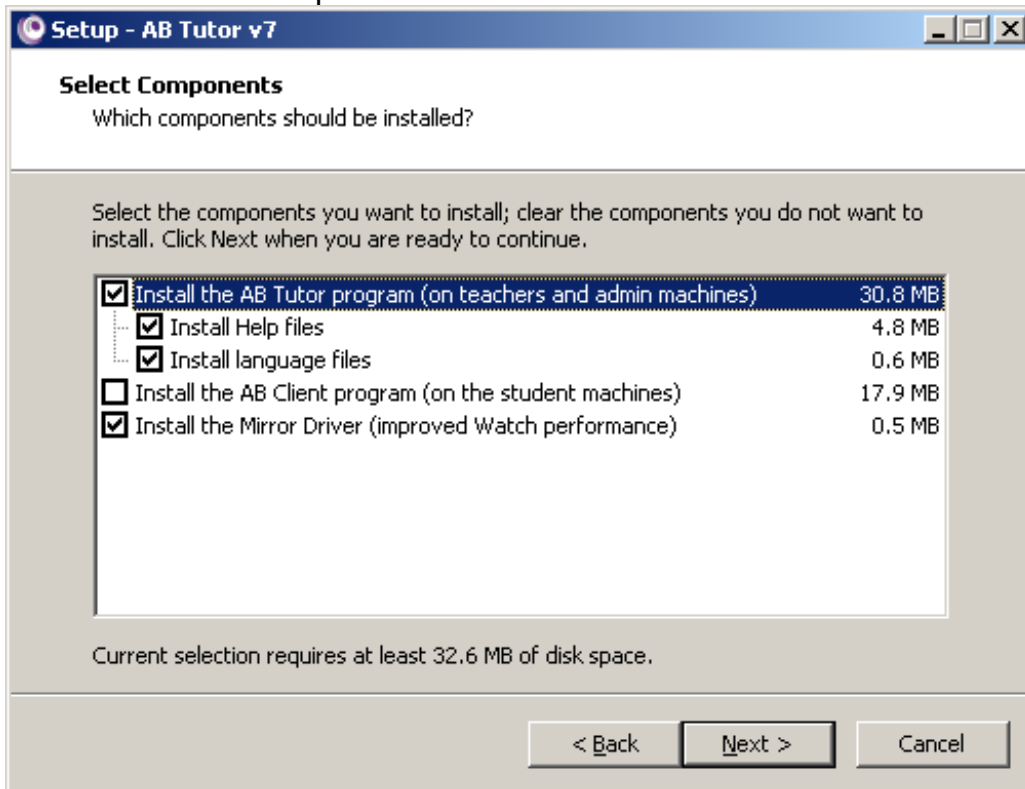
If you wish a network administrator to be able to connect to, control and monitor the tutor machines, then select **Install the AB Client program** as well.

You will also be prompted to enter a **Connection Password** (See Connection passwords). Passwords must not be more than 16 characters long.

It is highly recommended you use Connection Passwords to prevent unauthorised tutor programs from accessing your student workstations. Please make sure that you keep these passwords secure: for security reasons, there is no built-in way to reveal the connection password set on remote computers, and if you forget the password that has been set, you will need to re-install the software.

Type in the connection password you wish to set on your tutor machine (you MUST then set the identical password when you install the software on your clients otherwise you will not be able to connect to them.) Click on Next to continue.

The ABC Mirror Driver is only installed on Windows machines and will improve screen update performance of AB Tutor. You do not, however, have to install this driver.

Choose whether to create Desktop and Start Menu icons and select install to install the software.

Once you have clicked on 'Finish' in the Setup Complete screen, your installation of the AB Tutor will be complete - you may need to re-start Windows.

No icons are created if you just install the Client or Student component. To uninstall the client you must go to Control Panel - Add/Remove Programs. This will only be possible if you have not chosen the option to prevent the client program from being uninstalled via the Tutor program. For more information, see Additional Security.

Install the Client Program

Now you need to install the AB Client program on all the client machines:

You will also need Administrator rights to install the student/client program.

It can save you time if you copy the abtsetup7??.exe file to a common shared network drive that each client computer has access too and then just run it from each client machine. Alternatively, copy the msi file to a USB memory stick to insert it into each remote client machine you wish to install. Remember to delete this later so it is not available to all!

Log into each student workstation in turn. Go through exactly the same steps as above except:

When you get to the Choose Setup Type screen, be sure to only select AB Client and Mirror Driver (selected by default).

Type in the same connection password as you typed into the tutor program. The tutor and client connection passwords MUST be identical or you will not be able to connect to the clients from the tutor program.

If you wish to remotely deploy the client software to the student workstations via Active Directory and Group Policies, please see the section on the [Remote Deployment Utility](). This can be used to modify the msi file to embed the password, and also to push the installer out to multiple client machines simultaneously. You may also find the following knowledgebase article helpful: [Can I automate the installation of the client software?]().

You will not see any icons to indicate that the AB Client program has been installed. The client runs silently in the background and starts automatically when the machine is turned on and Starts up. You can also prevent the software being uninstalled or the software stopped - see Additional Security.

Manual silent Client Install

A silent installation is one that requires no interaction from the user, providing a convenient method for performing a set of automated remote installations.

abtcsetup.exe /verysilent

To specify a connection password as part of the silent install use the command line parameter 'PASSWORD=' followed by the password. (Passwords must not be longer than 16 characters and must not contain any spaces). This will be encrypted and stored in the client installation.

e.g. abtcsetup.msi /quiet PASSWORD=<password>

Installation

Download and Install - Mac

Download the appropriate AB Tutor Mac install files from www.abtutor.com. The Mac version has separate installers for the Tutor and the Client called ABTutor7??.pkg and ABClient7??.pkg, where the ?? represent the current release. If you are using OSX 10.5, please download the release for that version. The trial version available for download is a fully working but time-limited copy of the program; if you decide to purchase AB Tutor, you will not need to uninstall and re-install the software - you will simply need to activate the trial version with an activation code.

If you already have an account with AB Tutor, you can log into your account in the licence management system to download the most up-to-date files for the software version you have purchased. Use the 'Download' button under 'My User'.

There are four steps you need to run through to get AB Tutor up and running:

1. Start by installing the tutor program
2. Next, install the client programs
3. Configure your setup to allow AB Tutor to work
4. Activate the tutor (but not client) software

There is a tool available for embedding the connection password in the installer, allowing silent installs of the client software, allowing deployment with other utilities, such as Apple Remote Desktop. See below for instructions on using this tool.

Install the tutor program

Before you start, make sure that you have got Admin rights on the computer on which you want to install the tutor program. We recommend that you close down all running applications before installing.

Locate the AB Tutor installation program file (ABTutor7??.pkg) you downloaded previously. Double-click it to start installation and follow the simple on-screen instructions.

Accept the licence and press **Install**. Enter the Admin's password, and the software will install.

When the Control program is installed, the AB Tutor icon will be added to your Applications folder.

When you first run the software, we recommend setting up a **Connection Password** (See Connection passwords). Passwords must not be more than 16 characters long.

It is highly recommended you use Connection Passwords to prevent unauthorised tutor programs from accessing your student workstations. Please make sure that you keep these passwords secure: for security reasons, there is no built-in way to reveal the connection password set on remote computers, and if you forget the password that has been set, you will need to re-install the software.

Go to **Tools, Connection Security** and type in the connection password you wish to set on your tutor machine (you MUST then set the identical password when you install the software on your clients otherwise you will not be able to connect to them.) Click on **OK** to continue.

When the Control program is installed, the AB Tutor icon will be added to your Windows desktop.

Install the Client Program

Now you need to install the AB Client program on all the client machines:

You will also need Admin rights to install the student/client program.

i It can save you time if you copy the ABTClient7??.pkg file to a common shared network drive that each client computer has access too and then just run it from each client machine. Alternatively, copy the msi file to a USB memory stick to insert it into each remote client machine you wish to install. Remember to delete this later so it is not available to all!

Log into each student workstation in turn and run the ABClient7??.pkg installer.

Agree to the licence and enter your password when prompted.

When the software finishes installing, you will be prompted to enter a connection password. This must be the same as the password entered on the Tutor. Finally, restart the client machine when prompted.

i You will not see any icons to indicate that the AB Client program has been installed. The client runs silently in the background and starts automatically when the machine is turned on and Starts up. You can also prevent the software being uninstalled or the software stopped - see Additional Security.

Using the ABClient Silent Installer

Download the ABClient Silent Installer dmg from the downloads section of the AB Tutor website. Extract and run the ABClientSetInstallerPassword.app:
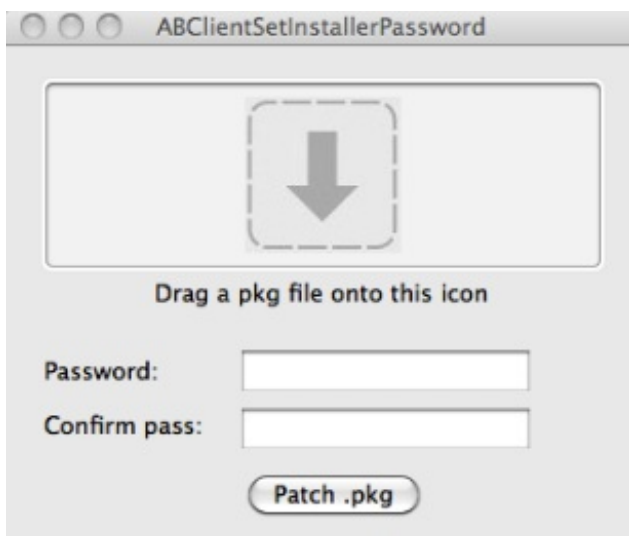
Drag and drop the installer pkg onto the target. It will turn green when the file is accepted. Next, enter the password into both boxes and select **Patch .pkg**. This will create a new installer called ABTutor7??.silent.pkg in the same location as the original installer. If this new installer is run on the client machines, it will install without asking for the password.

Installation

Download and Install - iPad

Pre - Installation Checks

Check that you have iOS 5.0 or greater installed on the iPads. All iPads can be upgraded to iOS 5.0 if they are not on that already. We also recommend that you check that you have a good Wi-Fi setup; one way to do so is to run a YouTube video on all the iPads at the same time. If you can run them all without stuttering then your Wi-Fi should be good enough. If your system fails that test then AB Tutor will work but some of the more bandwidth demanding features such as Watch , Demo and Exhibit may not work as well as they can.

Installing the AB Tutor iPad Client

The iPad Client can be downloaded from the app store from: https://itunes.apple.com/gb/app/ab-tutor-client/id681725833?mt=8

Once installed, this app is designed to work in Guided Access Mode to ensure your student stays focused in class. This will prevent the students from closing the AB Tutor app and using other apps. The other alternative is to disable access to other apps on the iPad. This can be done by going to **Settings - General - Restrictions** and setting up a pin. Ensure this pin is recorded for future use! Once the pin has been set, you can set which apps are allowed to run in the **Allow** section.

Due to restrictions on the iPad, a connection password can't be set during installation. To set the connection password on the iPad, select them in the Tutor console (the iPad doesn't have to be connected, so there's no need to change the connection password on the computer) then go to **Tools - Connection Security - Change Remote**. Leave the current password blank and put the password you want to use in the other two fields. Finally, click send to push the modified password out to the clients.

Installation

Software Activation

Once you have installed the software, you will need to activate it (you only need to activate the tutor program - you do not need to activate the client software).

When you first launch the AB Tutor program on the tutor machine, a window will appear asking what sort of activation you would like to use:

What do you want to do?

     ⊙ **Create a 30 day trial**

     ⊙ **Activate the Software**
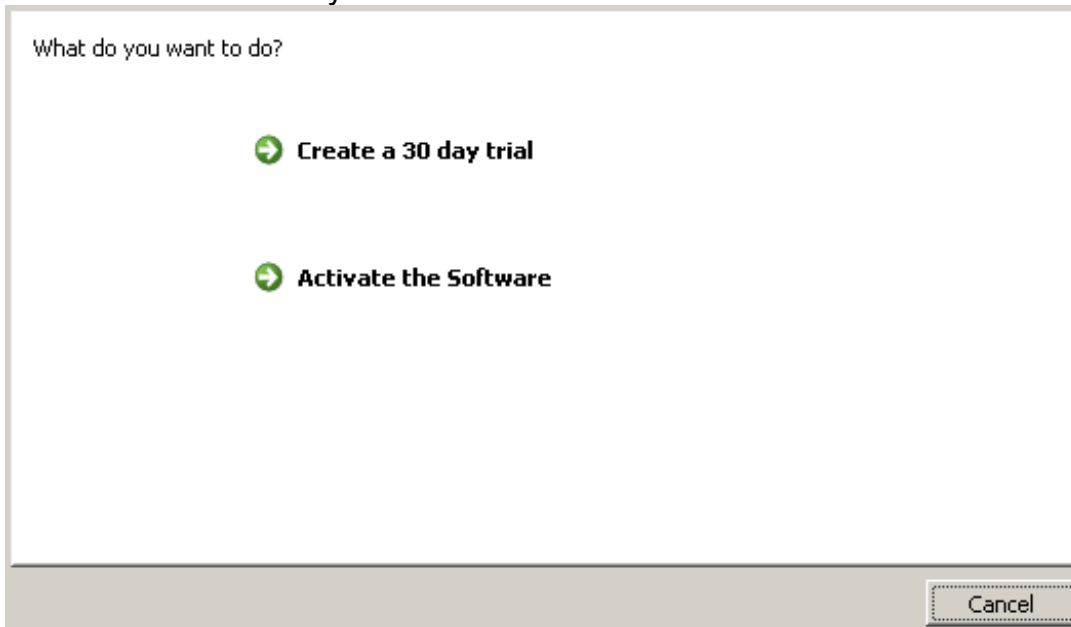
Cancel

- **Create a 30 day trial**

Please enter your ABTutor.com login details and press the **Activate** button below

Username user@school.com

Password: ••••••••

☐ Use proxy server to connect to internet

☐ No Internet connection

Back Activate Cancel

  - Enter your website username and password.
  - If your internet connection requires a proxy server, tick the proxy box and enter the details.
  - Select **Activate**

If the automatic activation fails, AB Tutor can be activated via the website.

  - Select **No Internet connection**.

Please enter your ABTutor.com login details and press the **Activate** button below

Username user@school.com

Password: ••••••••

☐ Use proxy server to connect to internet

☑ No Internet connection

Copy/Paste the entire code below into the 'Activate Trial' section in your account on the web site:

52616e646f6d495631323631333343231c8ea440abe9ff8b03e4aad0b9e65d54af0dad26
4029   bd01
24d0   9610
091d   711f
3685   a51d

Paste the generated activation code here then press the **Activate** button:

Back Activate Cancel

  - Copy the code from the top box to the **Activate Trial** page on the AB Tutor website.
  - Copy the returned code from the website to the second box in AB Tutor.
  - Select **Activate**

- **Activate the Software**

- If activating a normal single use licence, select **Activate Online via external licence server**

- Enter a unique friendly name for this installation. This must be different from all other computers registered on your account.
- Either enter in your website username and password, or your account's 20 digit serial number.
- If your internet connection requires a proxy server, tick the proxy box and enter the details.
- Select **Activate**

- If you have an Internal Licence Server, eg for a site licence, select **Activate using internal licence server**.

Please enter the name or IP address of the machine where the internal licence server is running.

Note: Make sure you can access this machine and the required port is not blocked by your firewall

Server Name or IP: [ ]   Port: [0]

Back   Activate   Cancel

  - Enter the server name or IP address and port number as requested. No other configuration is required. For more information, see Installing the Local Licence Server for more information.
  - Select **Activate**
- **Advanced activation for help desk**
  This option is intended only to be used when AB Tutor cannot connect directly to the external licence server. If the normal activation methods don't work, please contact us and we will try to determine the problem.

If everything is configured properly, then your software should register with the licence management system and you should be able to start connecting to your clients.

Activation messages

After pressing the Activate button one of the following messages will be displayed:

Successful activation

If the licensing is successful, the activation window will disappear, and AB Tutor will finish loading and start working.

No licences available

> ⚠️ There are no more licenses available. Please Login to verify your current licensing status.
>
> [OK]
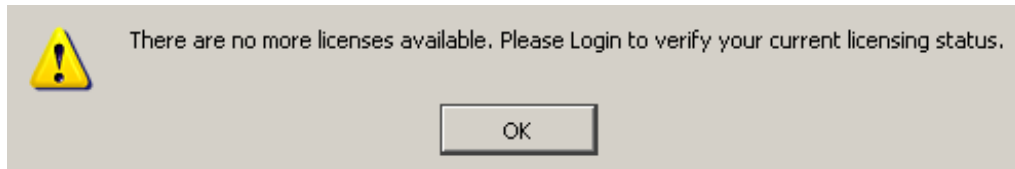
You get this message if there are no more free licences available. For example, you may have purchased 5 licences, and already activated them previously. To check your account and licence status, you need to log onto the online licence management system and possibly free up any obsolete licences. (You can identify these by noting when they last were run.) See Managing Licences

No account associated with this serial number

> ⚠️ Sorry, but there is no account associated with this serial number.
>
> [OK]
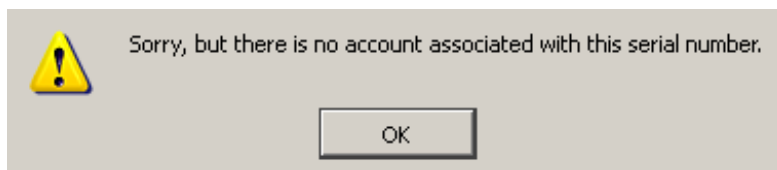
The account serial number you entered cannot be found. We usually recommend that you use cut and paste to enter serial numbers as this avoids any typing mistakes. Please check the number carefully and try again. If you still cannot get through, contact support@abtutor.com giving your customer account number, and any details you have of your order.

Validation error

> ⚠️ Remote host not found
>
> [OK]
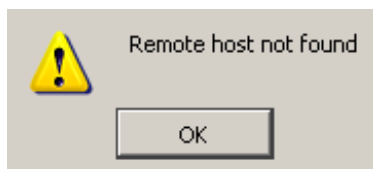
An error occurred in validating your licence. Please make sure you have access to the Internet from this machine.

If this occurs, check to make sure that you have an Internet connection, that you, your firewall/virus protection software has not blocked AB Tutor from accessing it. If you use a proxy server to connect to the Internet, press the Setup button to configure the proxy server and try again. (The Setup button only appears when an Internet connection failure occurs). Contact support@abtutor.com if you keep getting this error.
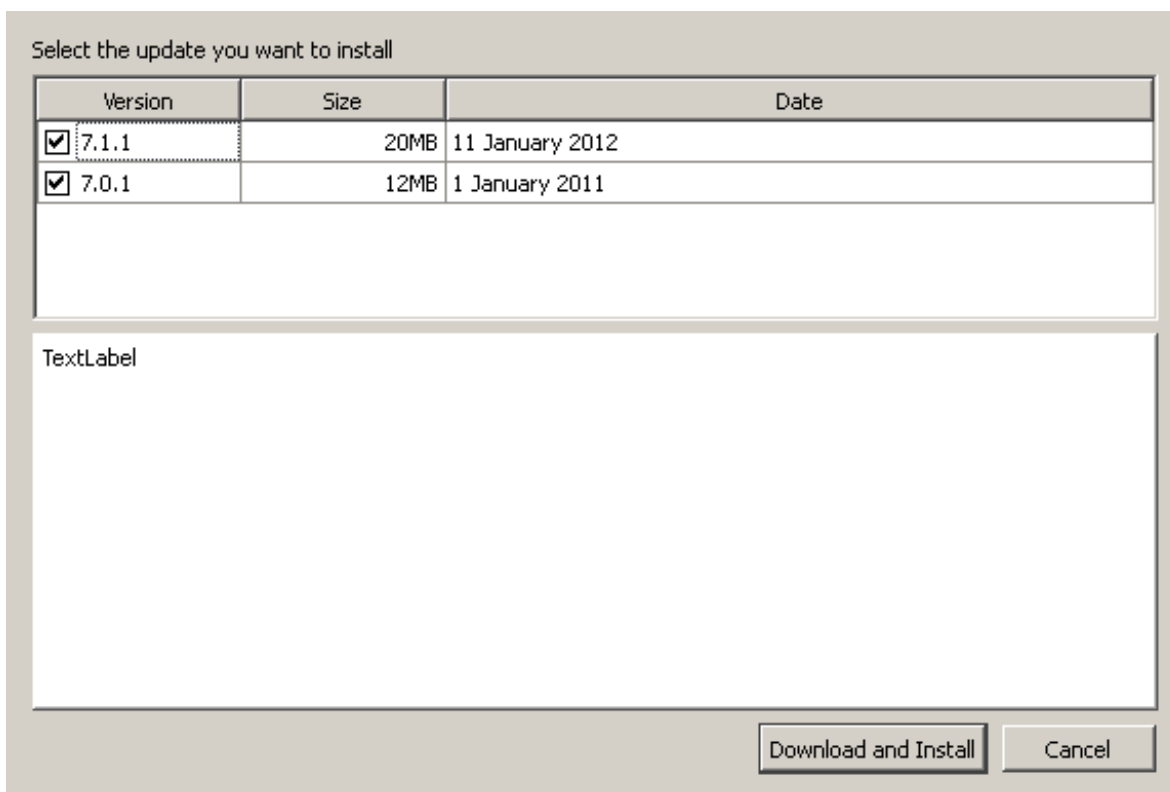
Installation

## Updating AB Tutor to the latest version

AB Tutor has an Automatic Update feature that, when initiated, will connect to the www.abtutor.com website and check for a newer version. If a newer version is available, you will be asked whether you would like to download and install it now.

Because you will be charged for major updates (e.g. from version 6 to 7) the option to automatically update to the next major version will not be available. In this case, you will need to purchase upgrades to the next version of AB Tutor, download them from your account in the licence management system and install them over the previous version.

- Select the Tools menu followed by Check for Updates.
- If updates are available then the following dialog box will appear:

Select the update you want to install

Version	Size	Date
☑ 7.1.1	20MB	11 January 2012
☑ 7.0.1	12MB	1 January 2011

TextLabel

Download and Install   Cancel

- Select the version you wish to upgrade to and click Download and Install to update the software..

Processing, please wait...

Downloading update...

[████████] 38%   Cancel
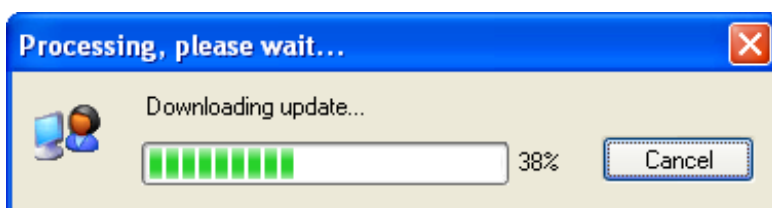
- Once the Update file has been successfully downloaded, the Tutor program will close and the update program will start automatically.
- After successfully installing the update, re-start the Tutor program and check the version number has changed to the newer one (select the Help menu followed by About).

If you know that a newer version is available but the Automated update indicates that you are running the latest version, then the software may have a problem in connecting to our update server. Please re-download the full MSI setup file from our web site and install over the top of your current installation. This can be found in the download folder under 'my user'.

Installation

Automatic update of client installations

⚠️ Although we make every effort to keep the software backwards and forwards compatible, it is inevitable that as new features are developed, changes in the client software will be necessary to cater for new functionality. We would therefore recommend that you always upgrade your clients as soon as you upgrade your tutor programs.

- Select the Tools menu, followed by Check for Updates to download and install the update to the main tutor workstation (see Software Updates below)
- Launch the new tutor program and connect to ALL client workstations.
- Select the Tools menu followed by Client Maintenance.
- Select the option Check for Older Client Programs and press the OK button.
- If the system detects any older remote clients, then the following dialog box will be displayed.
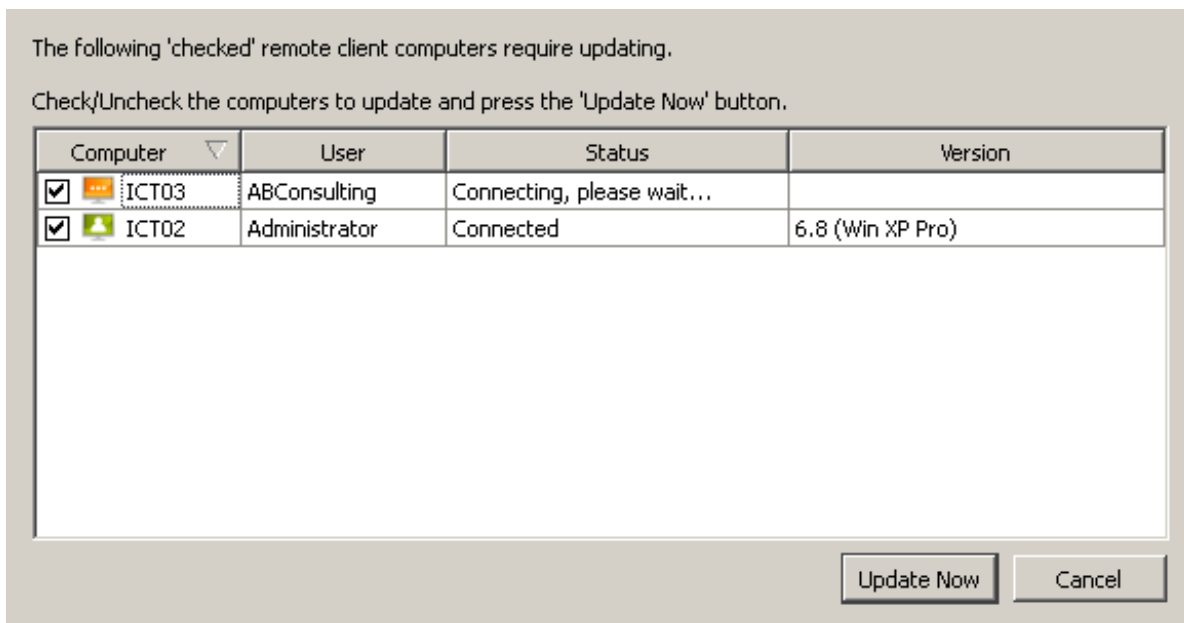
- Select the workstations to update and press the Update Now button

Forced Re-installation of the Clients

When you run the 'Check for older Client Programs', AB Tutor checks the version of the remote client program against the version on the Tutor's machine. (e.g. if the local client version is 7.1 and the remote version is 6.6, then the system will prompt you to update).

AB Tutor will only automatically select computers to upgrade if you have a newer version on your Tutor than on the Client, however if for some reason you wish to force a remote client to downgrade to the version on the Tutor, then you can force the system to send the files by ticking the checkboxes next to the computer name.

⚠️ 🪟 For versions up to 7.2.6, the autoupdate feature is Windows only. For Mac installs, the client will need to be reinstalled manually.

Installation

Uninstalling

Uninstalling the Tutor Program on Windows

Use the Add/Remove Programs function in the Windows Control Panel to un-install the program. If you also have the client installed on the Tutor Machine, this will be un-installed at the same time.

Uninstalling the Client Program on Windows

As no icons are created when you install just the client program, you will need to use the Add/Remove Programs function in the Windows Control Panel to un-install the client installation.

By using the Client Maintenance function, you can remotely uninstall multiple client workstations. Connect to the clients you wish to uninstall from, select them in the main window, then go to **Tools - Client Maintenance - Uninstall**. The selected clients will be shown with tickboxes. Ensure any clients you wish to uninstall are ticked, then click uninstall.

⚠️ If you have run AB Tutor and specified that the uninstallation of the software should be prevented, you will first need to launch the tutor program and connect to all the clients and remove this setting from the clients before uninstalling the client software.

See Tools - Connection Security - Additional, un-tick the option 'Prevent ABClient from being Uninstalled' then press the Apply button.

Uninstalling the Tutor Program on Mac OS

To uninstall the Tutor from a Mac, simply right click on it in the **Applications** menu, and select **Move to Trash**. This will perform an uninstall.

Uninstalling the Client Program on Mac OS

To uninstall the Client from a Mac, we recommend you use the **Client Maintenance** function, as described above. If this is not possible for some reason, please contact us at support@abtutor.com.

Installation

Remote Deployment Utility

Since version 7.1.0, AB Tutor includes a **Remote Deployment Utility** for installing software on remote Windows machines. It is designed for pushing the initial **AB Tutor client** installation out to fresh machines, but can also be used to install the **tutor** program, or other software entirely.

To open the **Deployment Utility** select it from the **Tools** menu.
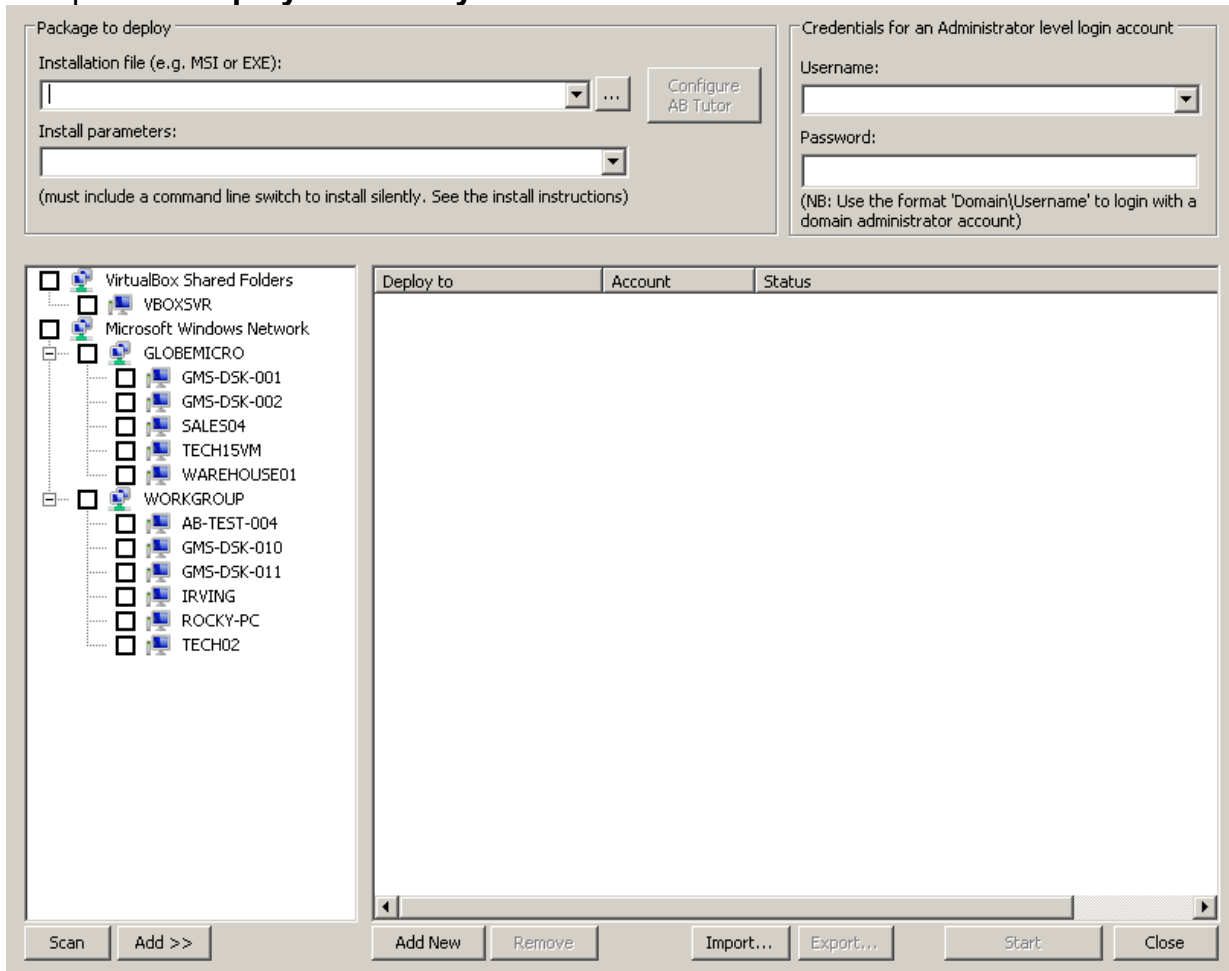
Click the ... button at the top to browse for the installer file. If the installer is recognised as an AB Tutor installer, the **Configure AB Tutor** button will be ungreyed, and will allow you to set the options for the install:

Note that as of AB Tutor 7.2.3, there are two installers available, an msi and an exe. We recomment using the exe with the RDU.
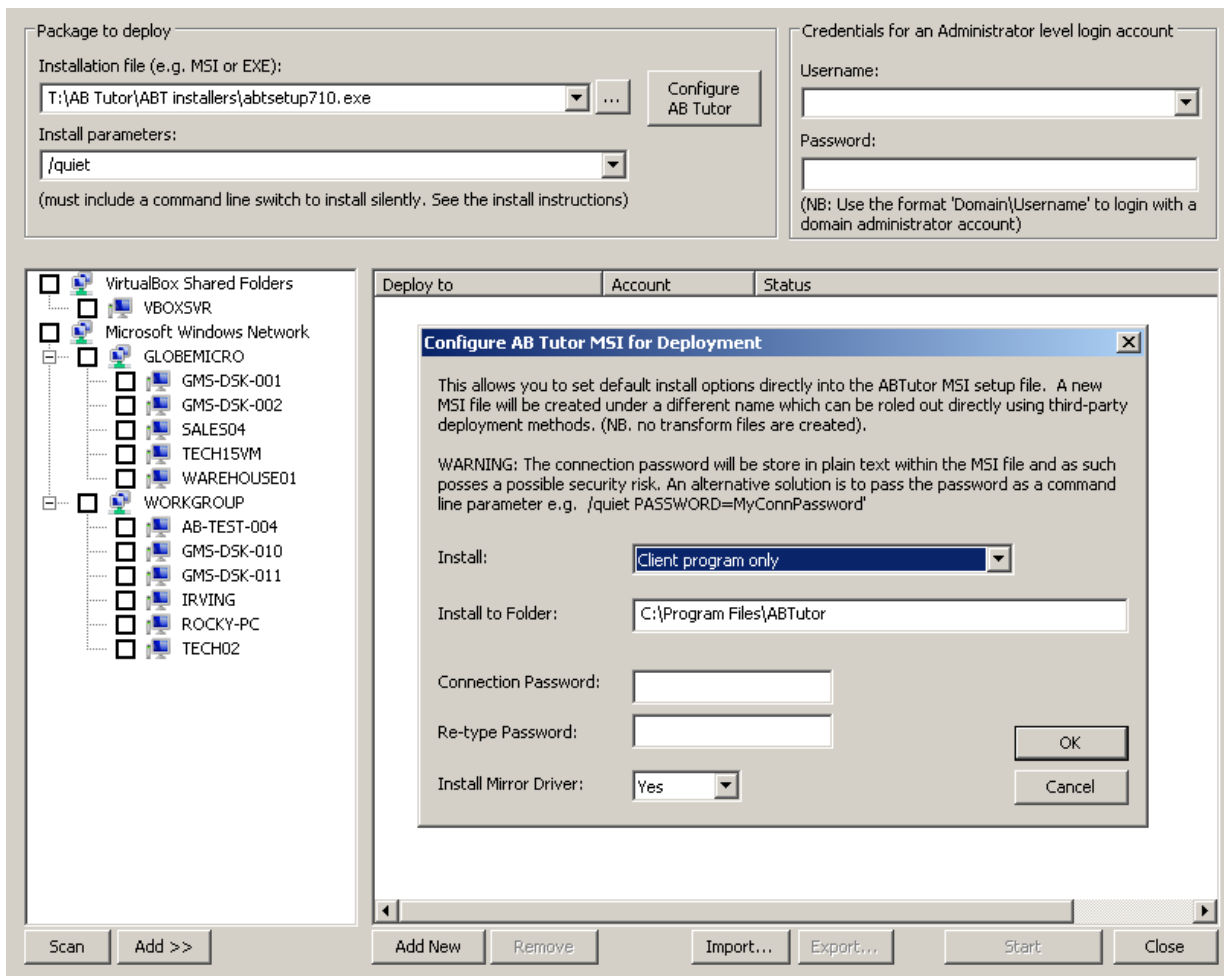
Here, you can select what part(s) of AB Tutor are installed - client, tutor or both - where it installs to, the connection password and whether the mirror driver is included.

Next, select the computers you wish to install to from the list on the left, then click **Add** at the bottom. Additional machines can be added manually by hostname by clicking the **Add New** button at the bottom. Additionally, groups of computers can be loaded and saved using the **Import** and **Export** buttons. After selecting computers, fill in a username with administrator access and the associated password in the boxes in top right. Finally, click **Start** and the software will be installed on the selected machines.

Installation

Local Licence Server

If you have a site licence, you will also need to install and configure the Local Licence Server. This piece of software manages the licences for your site - your tutors will connect to it to register themselves, and it will check with the AB Tutor Licence Management System to ensure that you have sufficient licences for the number of tutors running.

To install the Local Licence Server:

- Run the **ablicserver.msi** installer. The file will also have the version number at the end of the name.
- Click **next** until you get to the Licence Activation page. Here, you need to enter your serial number and friendly names for the v6 and v7 licences as required. If you don't have any v6 licences, just leave this box blank.

- Click **next**, **install** and **finish** to finalise the installation.
- The Local Licence Server will automatically connect to the LMS, and will appear in your **Installations** list.
- Once this has happened, you need to contact support@abtutor.com to get the licence server activated.
- When you get a reply saying it has been activated, please restart the licence server to refresh the licence settings. To do this go to **Start**, **Run**, **services.msc** then find the **AB Licence Server** entry, right click on it and select **Restart**.
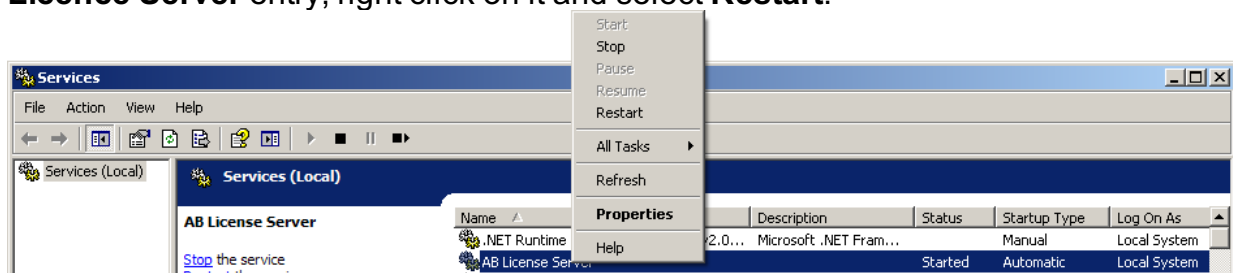
- The Local Licence Server is now running properly. Finally, set up your tutors to license against this server instead of the main one, as described in Software Activation.

AB Tutor Configuration

Configuring your machines to work with AB Tutor

AB Tutor communicates with its clients over port 5151. (If you install both the client and tutor on the same machine, it will also use port 5152). This kind of communication will normally be blocked by default by your firewalls. Additionally, to be able to communicate with the remote licence management system (LMS), the AB Tutor program needs free access to the Internet. In order to allow AB Tutor to work, please configure your machines as below:

1. Ensure that your firewall software (including Windows XP Firewall) allows both the Tutor program (ABTutor.exe) and the Client programs (ABClient.exe) to communicate with other computers in your network over port 5151/5152.
2. Ensure that your firewall software (including Windows XP Firewall) allows the Tutor program (ABTutor.exe) to communicate with www.abtutor.com over the Internet. It requires full access not just outbound access.

If your tutor machines connect to the Internet via a Proxy Server, you will need to configure AB Tutor to use it. To do this, go to Tools, Settings, Licence Server and enter the relevant details.

We would recommend that you create a new user, e.g. ABTutor, with access to the Internet, and enter that user's details into the User Name and Password fields. That way, the software will connect to the Internet automatically and will not need someone with access rights to sign on. This prevents a tutor having to sign into the Internet every time AB Tutor is launched.

Ensure that your routers and/or network switches do not block port 5151/5152 and allow AB Tutor full access to the Internet.

You will need to refer to your firewall and network routers/switch documentation for instructions on how to open up ports 5151/5152 and allow AB Tutor full access to the Internet.
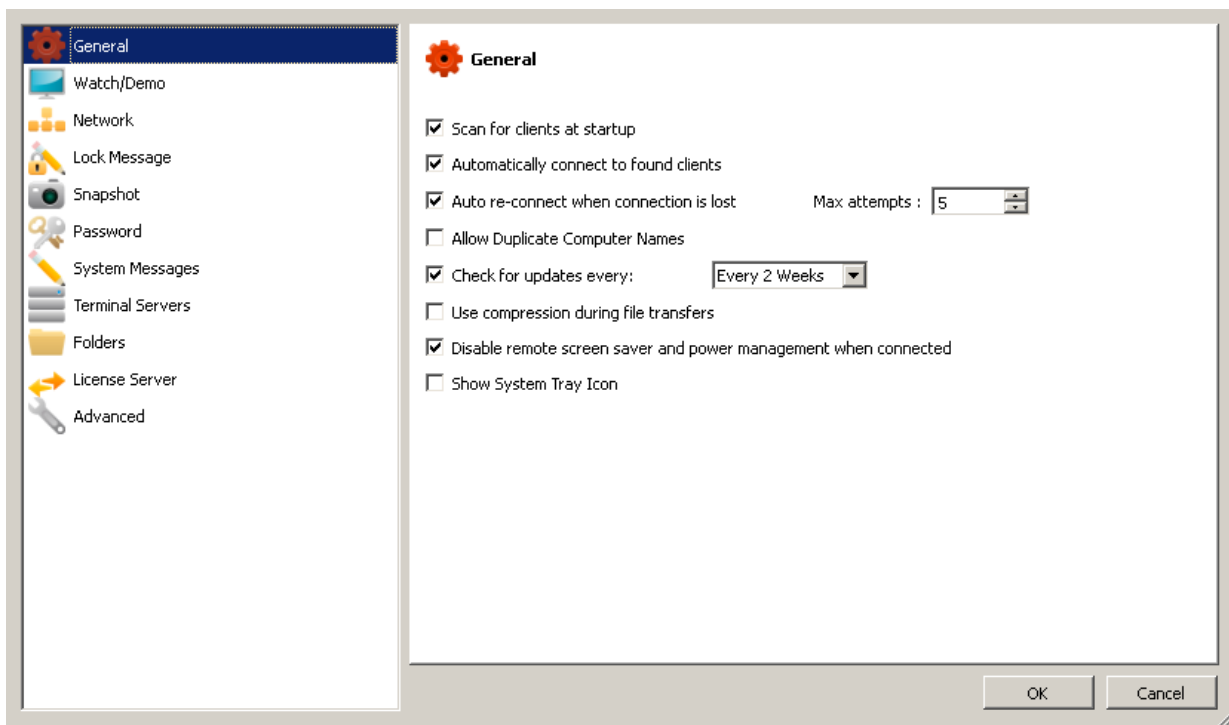
Configuration

AB Tutor Configuration

Select **Tools - Settings** to access the AB tutor configuration dialog box.

The Tools menu is only available to users who log in with administrator access

General

The Settings menu allows you to customise how AB Tutor functions.

Scan for Clients at Startup

If this option is set, the tutor program will automatically scan your network for running client programs when it is launched. We do not recommend this setting on installations where most of the connections will be by pre-set groups. This is because AB Tutor will scan for machines to which a tutor may not wish to connect - using valuable bandwidth.

Automatically connect to found clients

By default, when the system scans the network and finds client workstations, these are simply listed in the program as 'Found, but not yet connected'. This makes the program more efficient since it does not connect to machines which will not be used. Any command sent to a selected computer in this state will first connect before sending the command. By enabling the automatic connection option, the system automatically connects to all found clients. If you have a large network, this could result in the tutor program attempting to connect to hundreds of computers, which would be very heavy on bandwidth and could cause functionality problems. Use this option with care.

Auto re-connect when connection is lost

If for some reason the connection to the remote machine is lost (e.g. machine re-booted or network failure etc), then with this option selected, the tutor program will continue to attempt to re-connect to the machine up to the defined maximum number of attempts.

We would recommend that you keep the defined maximum number of attempts low to prevent Microsoft's in-built spam protection features from kicking in and stalling your network applications. (You will know that this has happened if you find EventID 4226 in your system log.)

Allow Duplicate Computer Names

By default, the system will not allow you to connect to computers with duplicate computer names (only one of the computers with duplicate names will be shown in the list). If you wish to override this restriction, then check this option.

It is not good practice to use the same computer name for different computers as this can cause identification problems for users and network administrators.

Check for updates every

You can get the software to automatically check for any updates by enabling this option and setting the checking period. When the system detects that it is time to check for updates, it will connect to the www.abtutor.com website and check for a newer version of the software. If a new version is found, a message box is displayed showing you your current version, the newer version, and asking if you wish to download it and start the update process.

Use compression during file transfers

If this option is selected, then any files transferred to or from a remote workstation will be compressed. This greatly increases the file transfer speeds.

Using compression for files that are already compressed will have little or no effect on speed of file transfer.

**Disable remote screensaver and power management**

When a machine goes into standby or hibernation, you will lose connection to that machine. To prevent this, you could of course change the power management setting on all remote machines, but this can be very time-consuming. So if you select this option then while any Tutor program is connected, that machine will not go to sleep.

This does not prevent the screen from going into standby.

Show System Tray Icon

Shows an icon in the system tray on the tutor machine whenever the application is running. This will show any alerts triggered by events from the clients, allowing the application to be minimised without missing any violations.

Watch/Demo
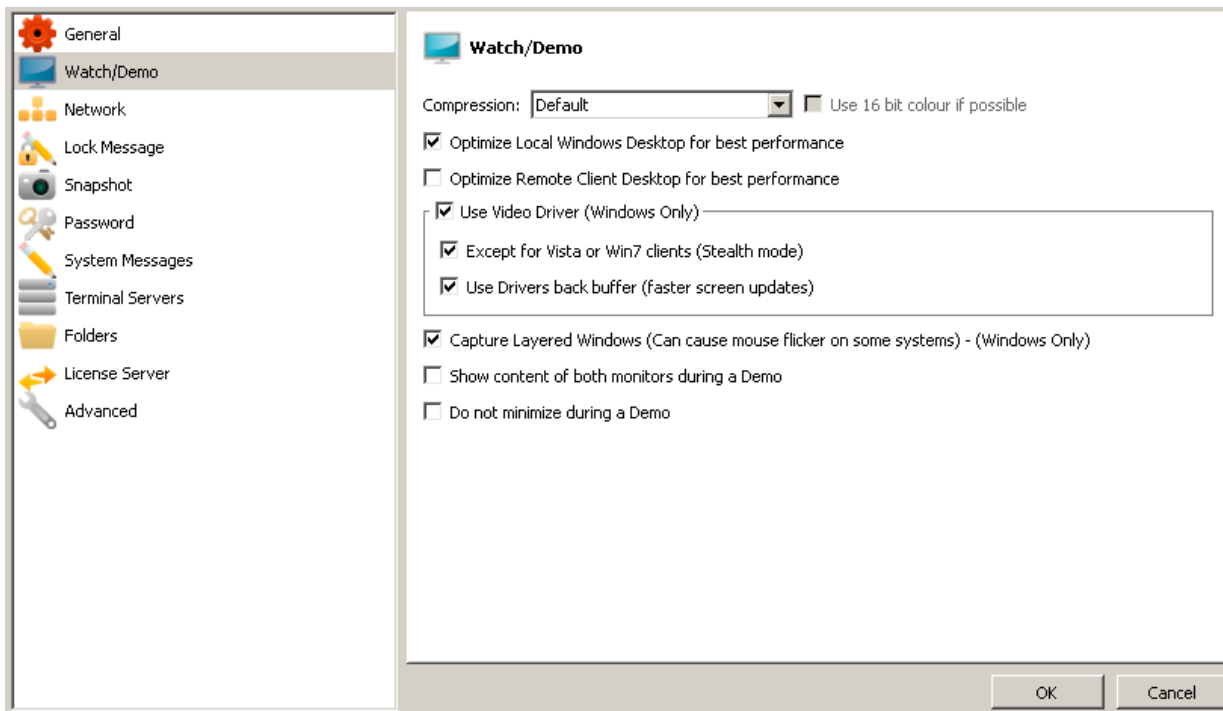
Compression

This is the type of compression used to transmit data to and from the students' workstations. The optimum compression type again depends on your network and computers.

- **Default** This is the standard compression, using zlib. It is lossless and doesn't use much processing power, however the compression is fairly low.
- **High** This uses jpeg compression, which is lossy, however it will provide the fastest screen updates. It is good for slow connections.
- **Medium** This uses RLE and zlib, to give a slightly better compression than Default, but requires more processing. It is also lossless.
- **Low** Low uses lossless block level RLE, allowing very good compression on large plain areas of screen, but poor compression in more detailed areas.

If the **video driver** is turned off, you can select **Use 16 bit colour**, which will reduce the amount of data transferred, however it will also significantly reduce the image quality.

Optimize Local Windows Desktop for best performance

If you enable this option then the desktop of your own computer will be modified for optimum screen transfer performance during a Show command.

Desktop optimization means that:

- Any desktop background pictures or patterns are removed.
- All menu display effects are removed (scrolling or fades etc.)
- All menu drop shadows are removed.
- All window title bar gradient fills are removed.
- Font smoothing is turned off.
- Tool-tip animations are removed.
- Smooth scrolling of list boxes is turned off.
- Window minimise/maximise animation effects are removed.

Optimize Remote Client Desktop for best performance

If you enable this option then the desktop of the remote client will be modified for optimum screen transfer performance during Watch command.

When this option is applied, the screen will flicker a few times as the changes are made. If you do not want the remote student to know they are being watched, then turn this option off.

Use Video Driver

When you install the AB client program on Windows NT based systems (e.g. 2000/XP/2003/2008/Vista or Windows 7 machines), you are given the option to install a special Mirror Driver to greatly enhance the screen update performance. Select this option to use this driver if possible, as it will enhance performance.

- **Except for Vista or Windows 7 Clients**

  When the Video Driver is activated on windows Vista/Window 7 machines, the desktop will automatically switch out of Windows Vista Aero theme in to the Standard Basic Windows Theme. This is a known quirk when using mirror drivers on Windows. If you do not want to indicate to the users on these machines that you are viewing their screen, then tick this option. The mirror driver will not be used, but you will not benefit from the enhanced performance and on some Windows 7 systems, this is quite significant.

- **Use Drivers back buffer**

  If this option is selected, then the remote screen data is grabbed directly from the mirror driver and will not use the standard Windows graphics libraries to get screen data. This will greatly improve performance. However, on some systems the remote cursor does not get displayed and so you will need to enable the local cursor if you wish to control the remote machine.

Capture Layered Windows

Some applications (e.g. Microsoft Office Ribbon Menu), use a technique to display menus or windows in a transparent (or layered) way. In order to pickup these windows AB Tutor must use a different method of grabbing the screen. Although this alternative method works, it can on some systems, cause the mouse cursor to flicker.

Show content of both monitors

If you are using AB Tutor on a system with dual monitors, then by default only the primary (or left hand) monitor will be shown during a Show command. If you wish to show the content of both monitors, then you need to select this option.
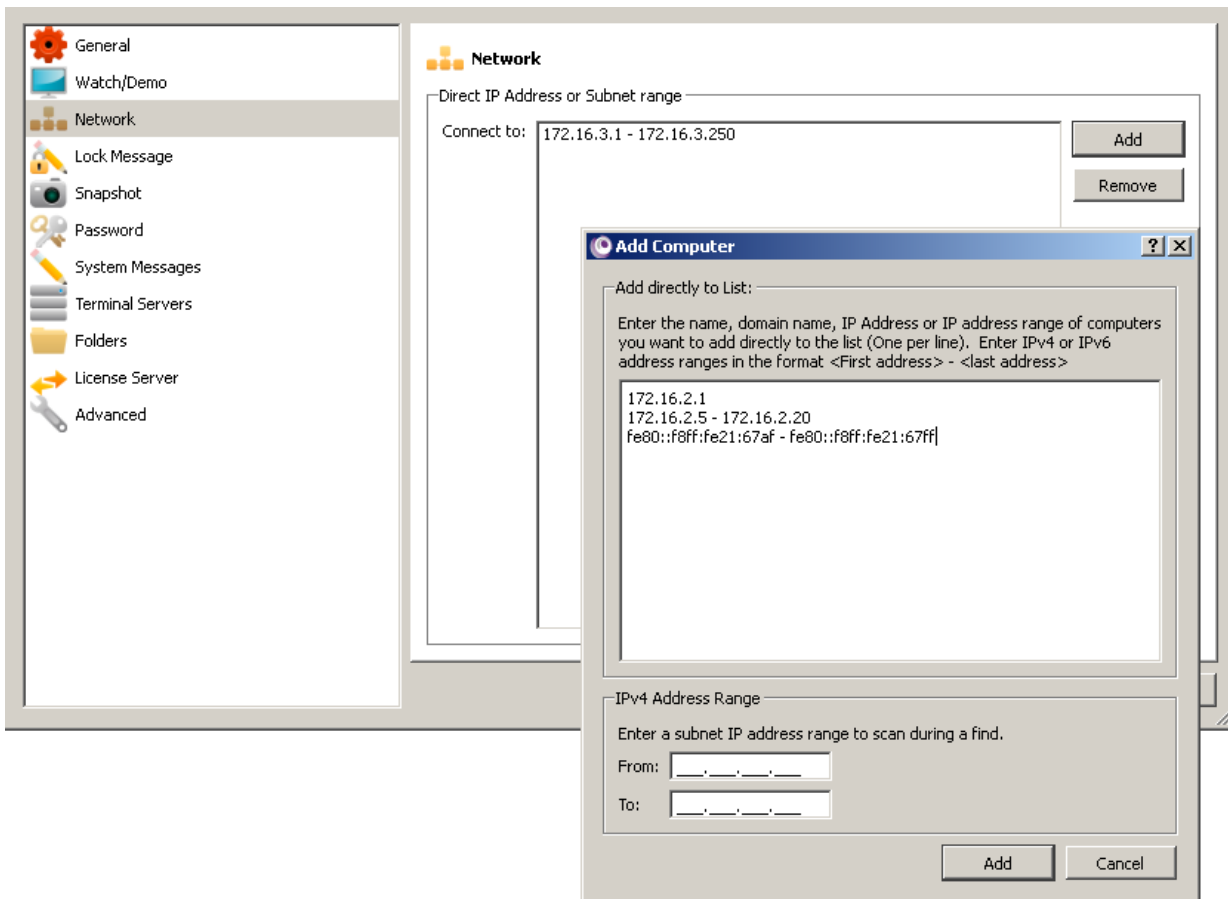
 This option is only visible if dual monitors are detected.

Do not minimise during a demo

If you are using the AB Tutor demo function to train other staff members on how to use AB Tutor, you may wish to keep the main window open while running the demo. This option prevents it from being hidden.

Network

The program sends a 'limited' broadcast message on port 5151/5152. It is limited because the message will be restricted to a single subnet (VLAN) and will not get forwarded by routers to other subnets. This can help reduce unnecessary network traffic across subnets and enhance connection security.

Direct IP Address or subnet range

If you know the exact IP address or name of a remote computer, this can be entered directly. You can also enter a range of IP addresses that will be scanned during a Find. This allows you to specify subnet ranges of computers that are not picked up by a normal network broadcast.

To enter new IP addresses, computer names or subnet ranges, press the **Add** button.

Enter the computer name, domain name or direct IP address into the box (one per line). Individual entries will be added directly into your computer list when performing a Scan whether these machines are found or not.

To specify a subnet range, enter the start and end IP addresses of the subnet to scan. The system will attempt to connect to each IP address in this range even after the Scanning process has finished. This is because the subnet scanning may take a while depending on the number of computers in the range. Remote computers will appear in the AB Tutor list as they are found.

⚠ Be specific with your IP address ranges to minimise the processing and network traffic. (We force a maximum range of 2000 computers which can take up to 60 seconds for the scan to complete.)

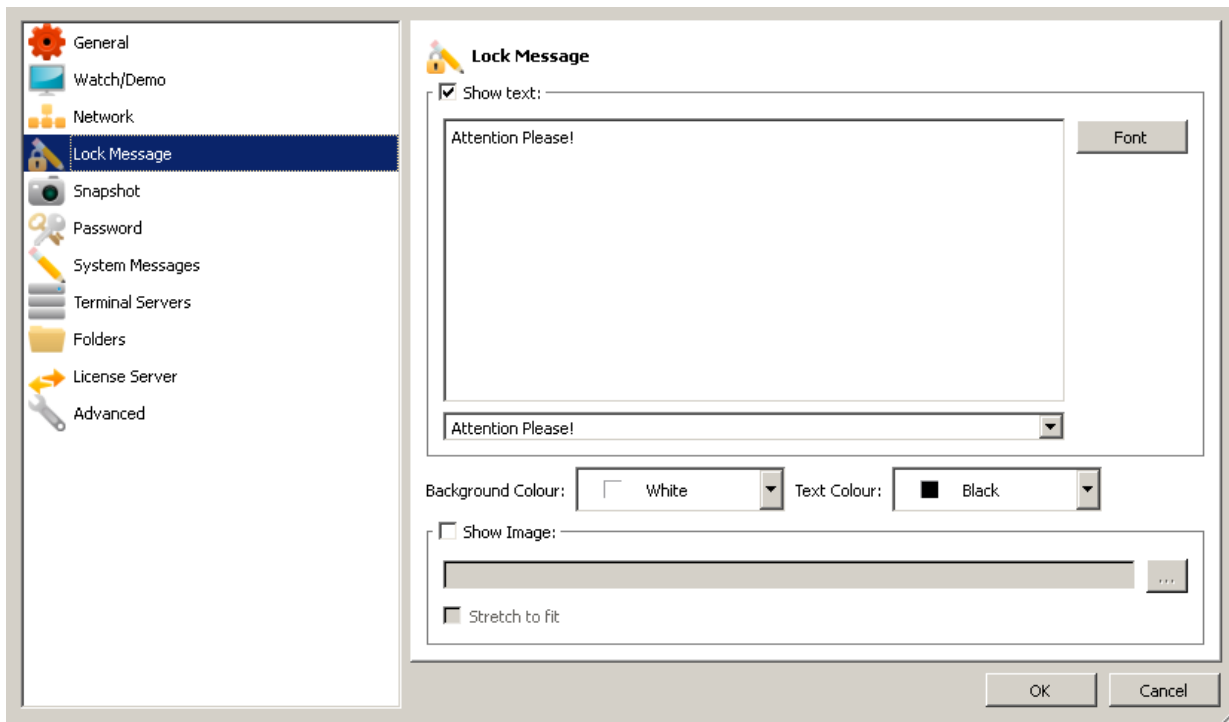Press the **Add** button to apply the additions or Cancel to abort.

A remote address/range can be removed from the list by first selecting it and then pressing the

Remove button.

Ranges (IPv4 and IPv6) can be added manually by typing them directly into the list in the form:

- 192.168.1.1 - 192.168.1.254
- fe80::f8ff:fe21:67af - fe80::f8ff:fe21:67ff

Lock Message

When you **Lock** the remote workstation you can display a message and/or a picture on the screen indicating that the keyboard and mouse are locked.

Show Text

Enable this option to display a message on the remote workstation's screen. Type the text you wish to display in the box. Press the **Font...** button to change the font attributes (e.g. Font type, size, colour etc.)

Background Colour

Select the colour to be used as the background when the remote workstation is locked.

Show Image

This option allows you to select the option to display a picture as the background to a locked screen. Press the ⟨...⟩ button to browse your local hard drive for an image.

One of the sample lock screens provided with the software.

We provide a number of sample lock screen images for you to use, but you can create your own using any normal image package.

ⓘ When you lock a remote workstation for the first time and the background image is not found by that machine, then it will be transferred and stored on the remote machine automatically.

Select the **Stretch to fit** option to resize the image to fill the remote workstation's screen no matter what screen resolution is used.

Snapshot
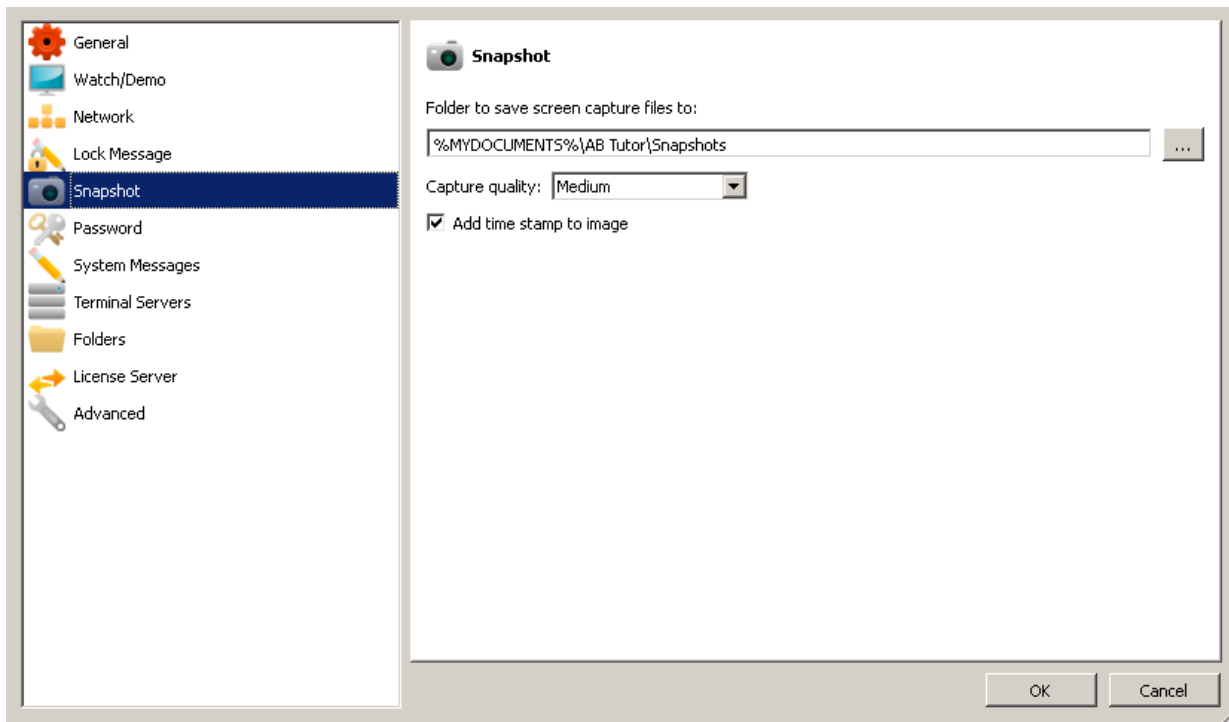
By default, AB Tutor will save any screen captures to a '%MYDOCUMENTS%\AB Tutor\Snapshots' directory. '%MYDOCUMENTS%' is substituted by the current user's personal 'My Documents' folder or home directory. Click on [...] to change the location for your screen captures. You can also choose to add a time stamp to the image, and play a capture sound to let you know that you have successfully captured the chosen screen.

Capture Quality

By default, Capture Quality is set to medium. If you need to have a high resolution capture, select 'High', but be aware that this will greatly increase the size of the file created. For multiple captures, try 'Low'.

Add time stamp to image

This option will put a pale text box in the top right corner of the image, showing the computer name, user name, date and time of the screenshot.

Password

⚠️ This is such an important area that we have dedicated a whole section to password management. Please refer to this section for information on setting and using passwords.

System Messages

This screen allows you to change the default text displayed on the remote machines when a user accesses a banned web site, blocked application, blocked drive or attempts to print when a print block is in place. Note that if changes are made here, they will not be pushed out to clients until the next time you connect to them.

The **Don't show popup message box for HTTPS blocking** will suppress the warning popup when a student attempts to go to a blocked https website. This is to prevent excessive popups for

blocked https elements on normal webpages. Note that this will mean that if the student attempts to go directly to a blocked https site, they will only get a 404 error message, and no AB Tutor warning.

Terminal Servers
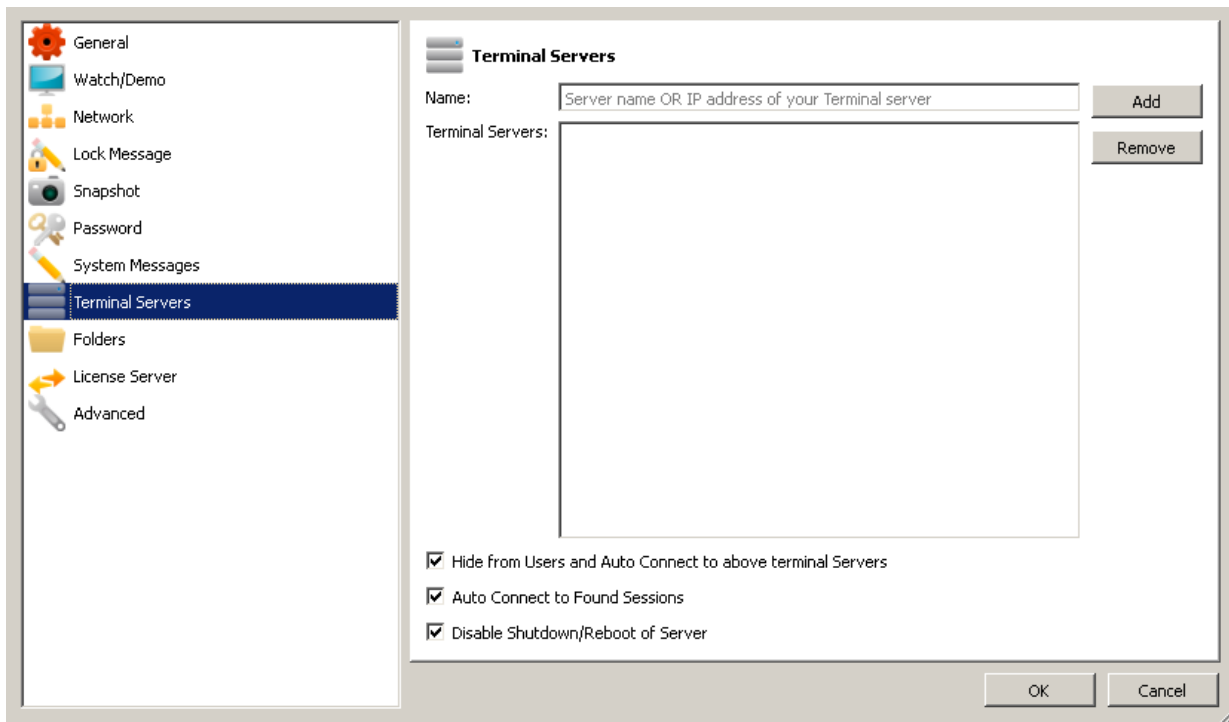
This tab should only be used if you are using terminal servers on your network and you want to automatically connect to them to detect which clients are active on the terminal server.

Enter the **name** of your terminal server and press the **Add** button.

Hide from Tutor and Auto Connect

Select this option to automatically connect to all the terminal servers in the list at AB Tutor start-up. If the tutor program is launched with Tutor access level, then these terminal server connections are not shown to the tutor but any connected clients will be shown depending on whether the client's computer name or user name exists within the selected Classroom Group.
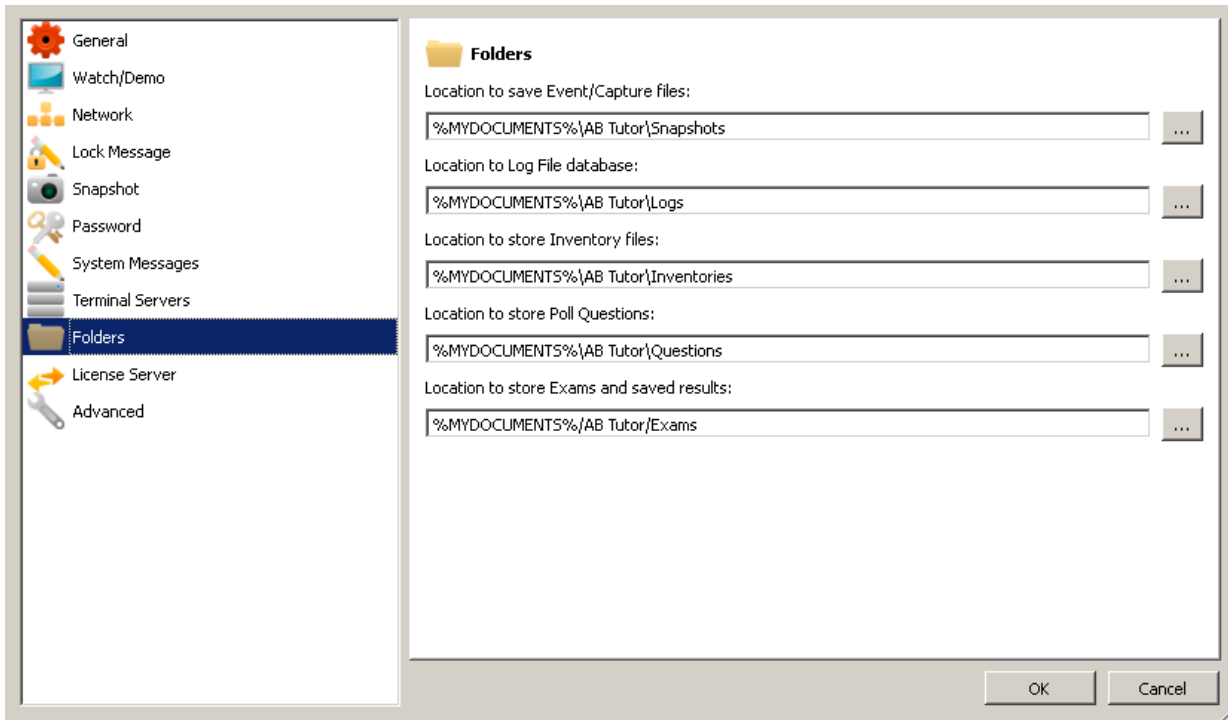
Auto Connect to Found Sessions

Tick this option to automatically connect to any terminal server clients that become active.

Disable Shutdown/Reboot of Server

This is an extra level of security to prevent the terminal server from inadvertently being shutdown or rebooted. We recommend that this option is always selected.

Folders

This tab allows you to customise where various files are stored (e.g. screen capture, log files, inventories, video or poll questions).

%MYDOCUMENT% is a variable that will get replaced by the currently logged on users 'My documents' folder or home directory.

Licence Server


If your network environment requires that you need to access the internet via a Proxy Server, then you must enter the details in this screen.

- **Proxy Server:** The IP address or server name of your Proxy Server
- **Port:** The Port number used to access the proxy server
- **Username:** If your proxy server requires authentication, then enter the username
- **Password:** The password used to access the proxy server

- **Internal Licence Server:** If you have an internal licence server at your site, fill the details in here and AB Tutor will use it instead of the remote one.

Advanced
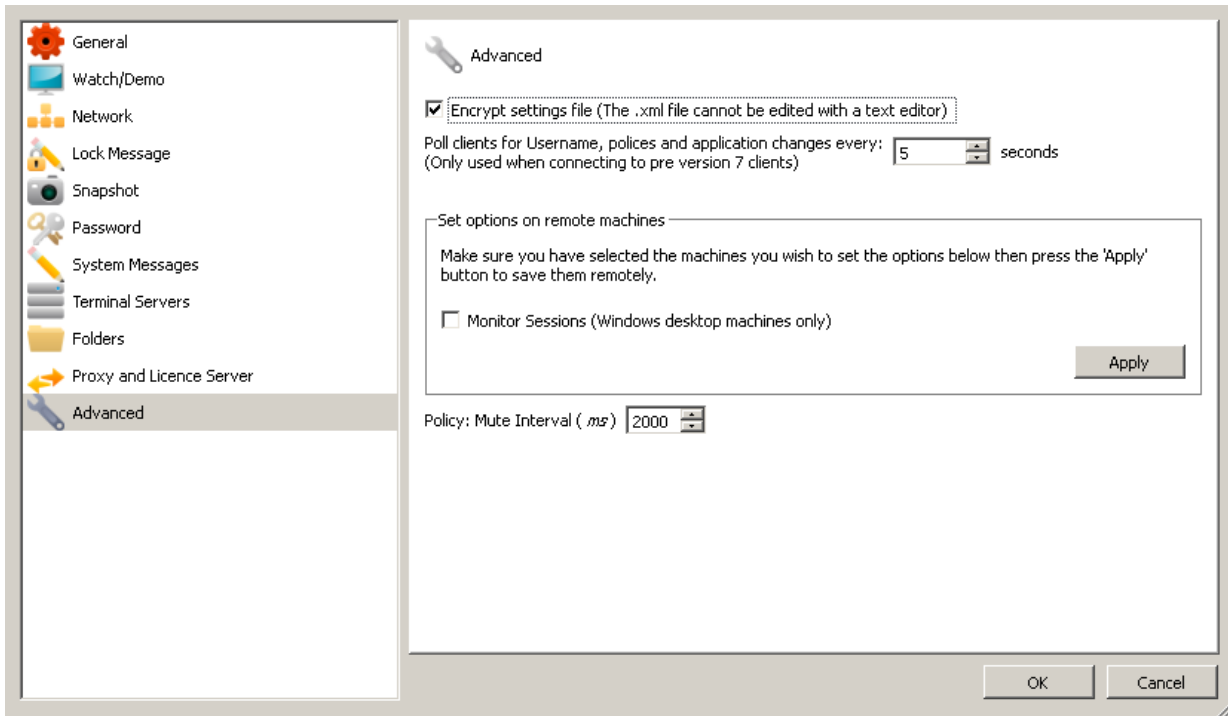
Encrypt settings file

If this option is selected, then the ABControl.xml file will be encrypted preventing anyone from viewing or editing this file outside of the AB Tutor program.

⚠ Once encrypted, versions of AB Tutor older than 6.2 will not be able to read this settings file.

Poll clients every

For v6 and earlier only: When connected, AB Tutor needs to poll each remote client for changes in various states. (e.g. If the user logs on/off, when applications are run or policies are set or change etc). This is done on a timer (default: every 5 seconds). If you want to reduce network traffic, then you can increase this timer to poll after longer periods.

Monitor Sessions

If a non-server operating system (eg Windows 7) is being used as an RDP host, select the relevant computer(s), tick this option and select **Apply**. This will tell AB Tutor to look for additional sessions on the computer.

Mute Interval

This option adjusts how often the client programs check the status of the audio mute, if a mute policy is applied. It can be reduced (to 50 or even 5ms) to prevent abuse, or increased (to 2000ms) to reduce load on the client.

Configuration

The Config File

Most AB Tutor settings (including policies and groups etc.) are stored in a file called ABControl.xml. This file is located in:

- Windows XP: c:\Documents and Settings\All Users\Application Data\AB Tutor\
- Windows Vista/7/8: c:\ProgramData\AB Tutor\
- Mac OS: /etc/AB Tutor/ or /Users/$user/library/preferences/AB Tutor/ or /Users/$user/AB Tutor/

After you have configured one tutor program you can copy this file to other tutor installations so you don't need to re-enter all the settings each time.

Shared Configuration Files

By using a command line parameter you can specify where the ABControl.xml file is located. This allows you to save the file on a shared network drive so all tutor programs can use the same file.

Use the p switch:
-p <path to file>
or
/p <path to file>

eg: C:\Program Files\ABTutor\ABTutor.exe -p n:\shared

eg: open -a "ABTutor" --args -p /home/user/abtfiles

Note that the trailing slash on the address should be removed.

We recommend you protect this shared file from being changed inadvertently by other tutor programs and that only the network administrators have control over the settings. Make the file Read Only by using normal NTFS or network security. Also, for security reasons only allow known teachers access to this network folder.

Advanced Config Options

AB Tutor has some advanced options which can be applied by editing the ABControl.xml file. The xml file is encrypted by default to protect it from tampering. To unencrypt it, load AB Tutor as an Administrator, go to **Tools** - **Settings** - **Advanced** and untick **Encrypt settings file**:
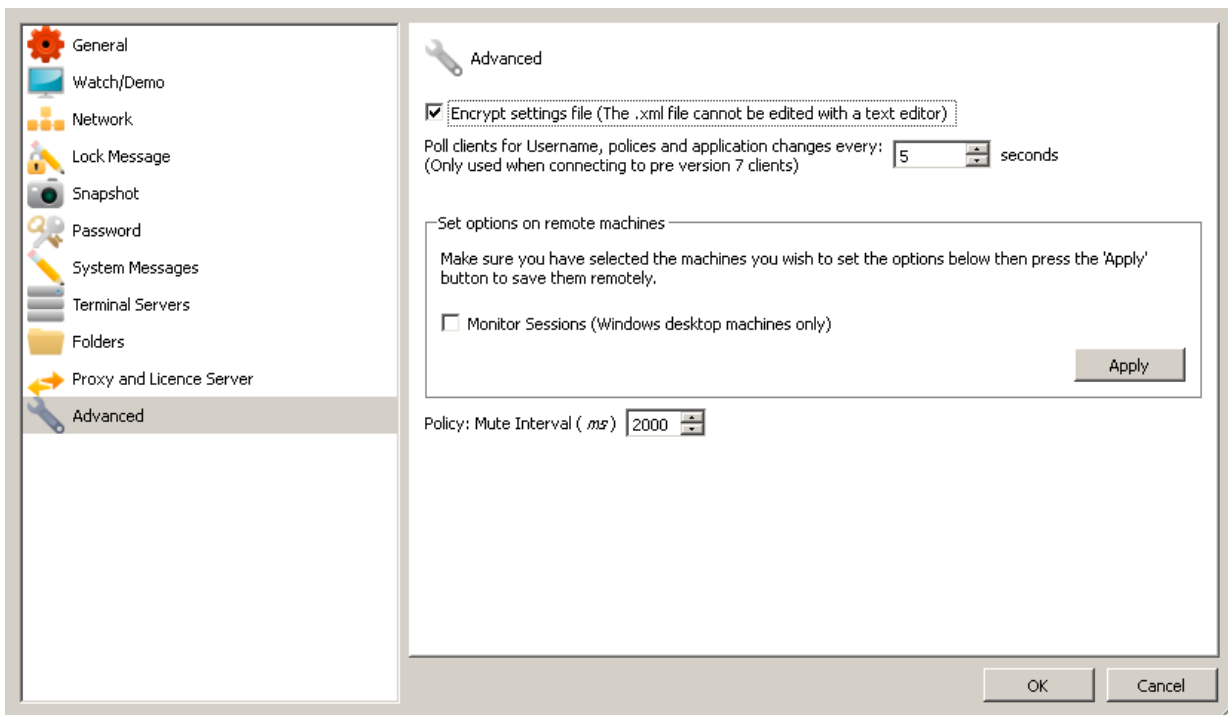
Additional options should be added to the config file after the **<abtc_settings>** line and before the **</abtc_settings>** line. The order does not matter.

<LeaveProxyBypass>1</LeaveProxyBypass>
This option will leave proxy bypass settings on the client unchanged when a web block or web log policy is applied. This means that the AB Client internal proxy can be bypassed for local addresses, to allow authentication to work. Please note that this also means that use of these sites will not be logged.

<BlockCADonLockoutXP>1<BlockCADonLockoutXP>
This option will block ctrl+alt+del in Windows XP when Lockout is selected from a watch session. This is to get around a known issue in XP where if C-A-D is blocked for the student, it will also be blocked for the Tutor. The default is 0 which allows the Tutor to use the C-A-D button in the watch toolbar, but doesn't block it for the student. If this is changed to 1 (as shown), it will be blocked for both Tutor and student.

Configuration

Startup Switches

Some startup options for AB Tutor can be configured with command line switches. Currently available are:

- **-g** to make AB Tutor automatically connect to a specific group. This is useful on PCs that are always used in a specific classroom.
- **-p** to change the path to the settings file. This allows a single settings file to be kept on a server for all Tutors to use. Note that the path should be stated without the trailing slash/backslash and without the filename, eg -p c:\temp\abfiles or -p /home/user/abfiles - these can also be network shares. AB Tutor will automatically add the /abcontrol.xml to the end of the path.
- **-t** to automatically log in as a tutor if no tutor password is set, bypassing the password prompt.
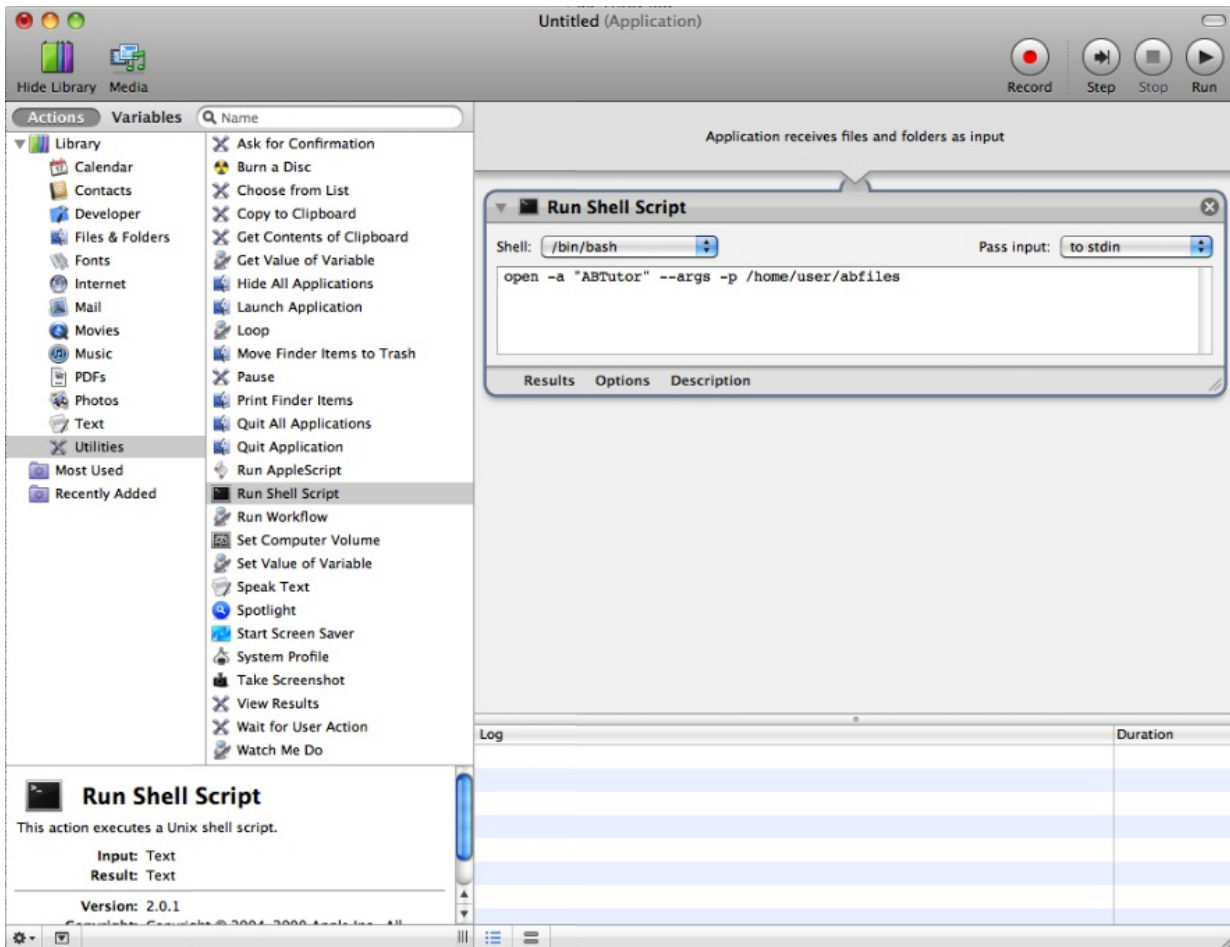
⊞ Startup Switches in Windows

To set startup switches in windows, right click the AB Tutor icon on the desktop and select properties:
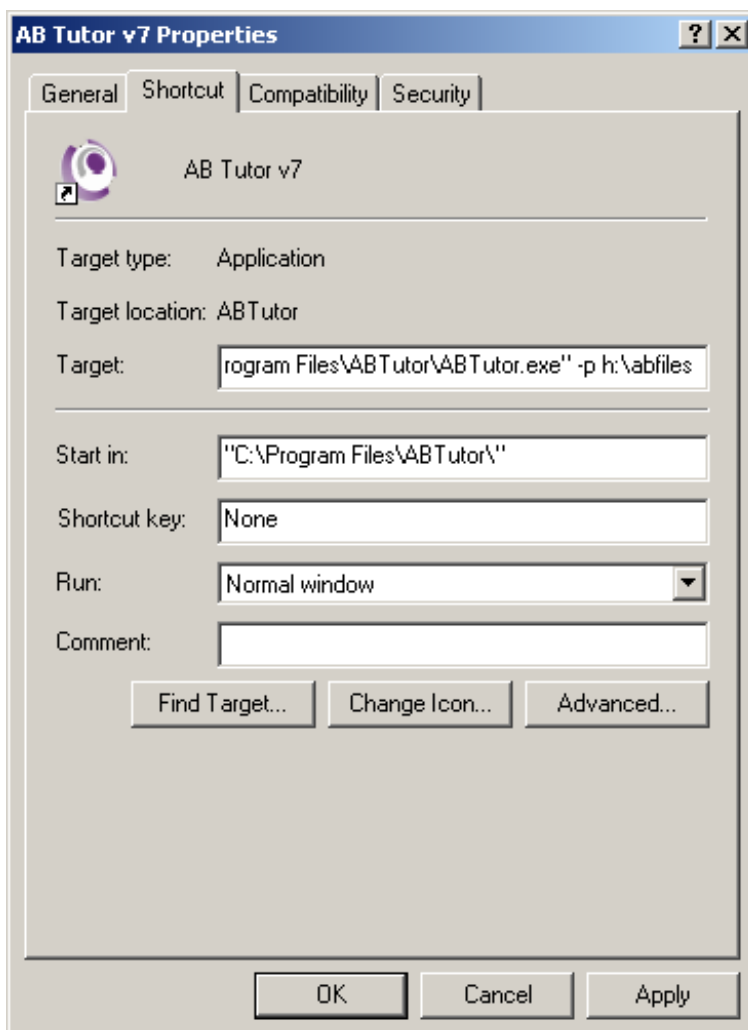
Add the switches and their parameters to the end of the **Target** field, as shown.

⬤ Startup Switches in Mac OS

Run **Automator** from the Applications menu. Select **Application**. Next, select **Utilities** and double click **Run Shell Script**:

Enter **open -a "ABTutor" --args** followed by the switches and their options as applicable.

Network shares (eg SMB shares) appear in the **/Volumes/** directory when mounted, so to use a shared config file, you would use **open -a "ABTutor" --args -p /Volumes/sharename/directoryonshare**

Security

⚠ AB Tutor provides powerful remote monitoring and control functionality. You must therefore take steps to secure your installations of the tutor and client software and prevent un-authorised users from misuse of the system.

There are two types of passwords that you can set in AB Tutor to help protect the security of your workstations. These are start-up passwords and connection passwords.

Startup passwords and levels of access

There are two levels of access to the Tutor program: **Administrator** and **Tutor**. Access to both of these are controlled by start-up passwords.

The Administrator access level allows a network manager to control how the Tutor program connects to other workstations through its settings, group management and policy management tools. It also allows an administrator to restrict Tutor level access to pre-set groups and to limit the functions that are available to tutors connecting to those groups. The Administrator has access to some very powerful features (such as controlling windows policies) and should therefore be limited to users with sufficient technical and networking expertise.

Tutor access rights are simply to prevent unauthorised users from using the program. The administrator controls whether to enable this security level or not. Someone at Tutor access level cannot get to any of the configuration options within the system and cannot connect to workstations outside the classroom groups created by the administrator.

The following table gives an overview of the rights of the Administrator and Tutor.

Feature	Tutor	Admin
List view tab	?	✓
Icon view tab	?	✓
Question polling tab	?	✓
Events tab	?	✓
Administrative tools tab	✗	✓
Find and connect to computers within a pre-defined group	✓	✓
Find and connect to all computers	✗	✓
Connect	✓	✓
Remote watch and control	?	✓
Send key sequences	?	✓
Manage key sequences	✗	✓
Show	?	✓
Chat	?	✓
Audio	?	✓
Launch and close programs	?	✓
Create policies	?	✓
Set and remove policies which have previously been created	?	✓
View log files	?	✓
Lock/unlock remote machines	?	✓
Logon/logoff/shutdown/reboot remote machines	?	✓
Send/collect files	?	✓
Customise toolbar settings	✓	✓
Licence activation	✗	✓
Groups - set up and manage groups and classrooms	✗	✓
Settings (General, View, Network, Lock Message, Capture, Passwords)	✗	✓
Setting and removal of connection passwords	✗	✓
Client maintenance	✗	✓
Check for and perform updates	✗	✓
Purge remote log files	✗	✓

? All those functions marked with a question mark can be disabled by an administrator, so might therefore not be available to everyone logged in as a tutor. (See Group Restrictions)

Security

Start up passwords

Start-up with no passwords set.

By default, no start-up passwords are set in AB Tutor. With no start-up passwords set, one of the following dialogues is displayed upon launch of the Tutor program. They will automatically disappear after a few seconds, or immediately if you click on them.

If you are still in the trial period then the following will be displayed:

Start-up once passwords have been set

If start-up Administrator or Tutor passwords have been set through **tools, settings, passwords**, a different dialog box is displayed and you must enter the correct password to gain access to the program.

If you have set an Administrator password, this must be entered to gain access to the administrative features.

If you have specified an administrator password, but no tutor password, then if the user simply presses the OK button, they will gain access as a normal tutor. If a tutor password has also been set, then the password field cannot be left blank and a valid password must be entered to gain access to the program.

It can sometime be confusing for a tutor if they are presented with a password box but do not have to enter a password to gain access. To get round this, you can add a command line switch to the launch shortcut which will not display this box if an admin password **has** been set and **no** tutor password has been set.

Syntax: -t or /t

E.g: C:\Program Files\ABTutor\ABTutor.exe -t

With this command line switch set, the normal AB Tutor splash screen will be displayed and will disappear when the user clicks on it or waits for 3 seconds.
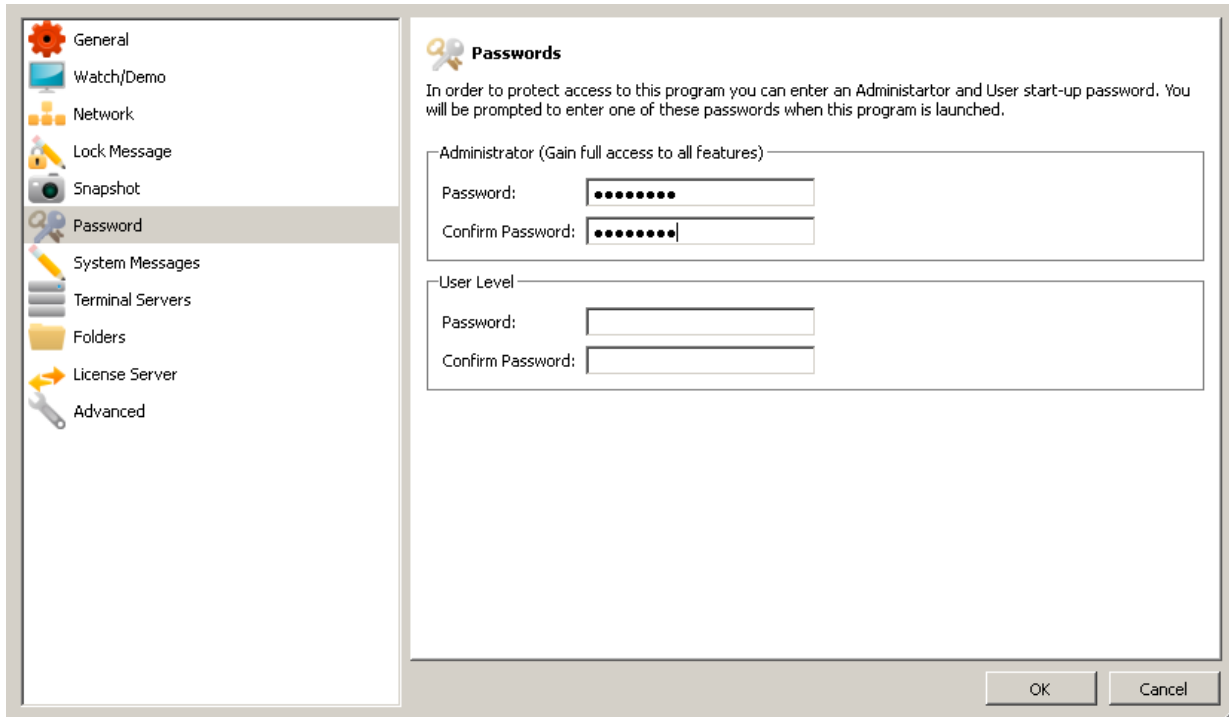
If you forget your start-up password, you will have to un-install and re-install your installation, or delete your settings file to continue running the software.

Security

Setting startup passwords

In order to set passwords, you must have administrator access rights.

Select the Tools menu followed by Settings and click on Passwords

To set the administrator password, enter your password and confirm it in the second edit box. The passwords must match; if they don't, you will be asked to re-enter the passwords.

To set a Tutor password, again enter the required passwords.

Both passwords can be left blank, in which case no password validation will take place on start-up and full administrator access will be granted to whoever launches the program. It is strongly recommended that you create passwords as soon as possible, carefully control who has access to these passwords and change them on a regular basis in case they have been inadvertently disclosed.

Security

Connection passwords

Connection passwords are how you protect your clients from being remotely watched and controlled by other tutor programs. Until you have set a connection password on your client machines, any computer running the tutor program will be able to connect to your clients. Once a connection password has been set on all clients, only those tutor machines with the same password as the clients will be able to connect to them. If a tutor machine with no connection password, or with an invalid password (e.g. passwordA) set, tries to connect to a client with a different password (e.g. passwordB), an 'Authentication Failure' message will appear on the main screen, and the status of the client will read 'Invalid Connection Password.' This same message will appear if a tutor with a password set (e.g. passwordA) tries to connect to a client with no password set.

To prevent unwanted monitoring of your clients, we recommend that you protect them with connection passwords as soon as possible. Please carefully control who has access to these passwords and change these on a regular basis in case they have been inadvertently disclosed.

How Connection Passwords Work

The diagram below shows three tutor programs, each with different connection password configurations.
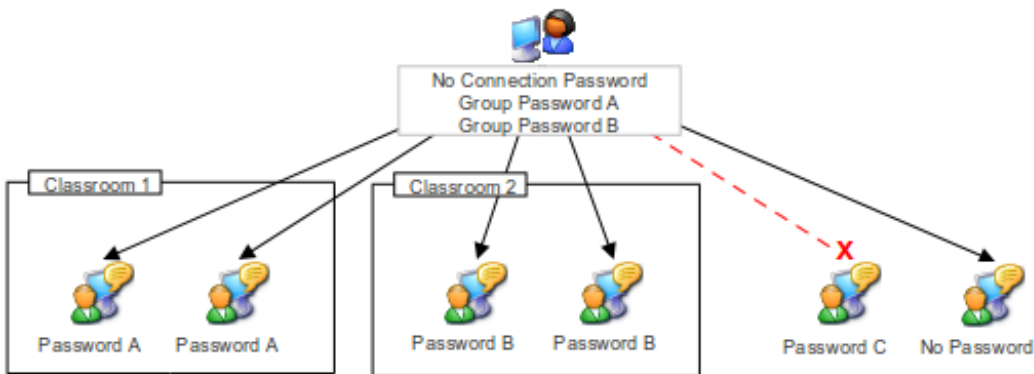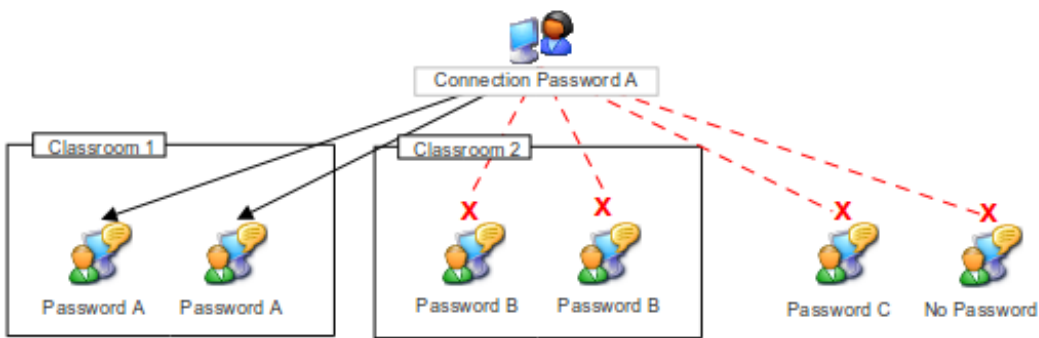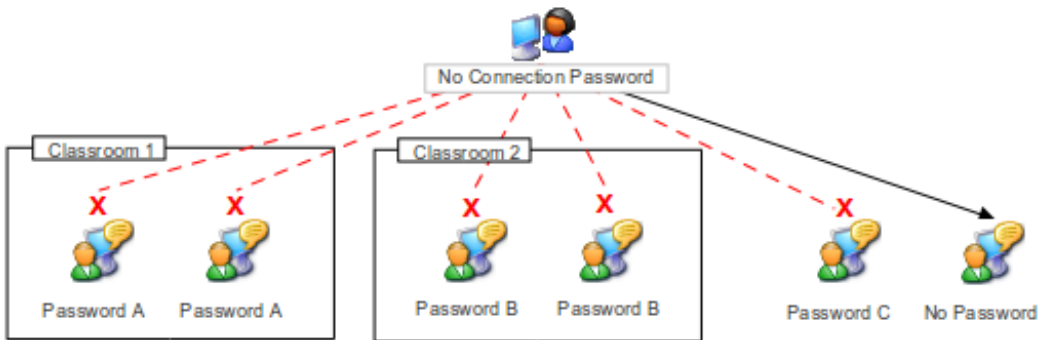
Setting connection passwords

There are two ways of setting connection passwords. You can either do this at installation or later using the AB Tutor program.

Setting connection passwords at installation

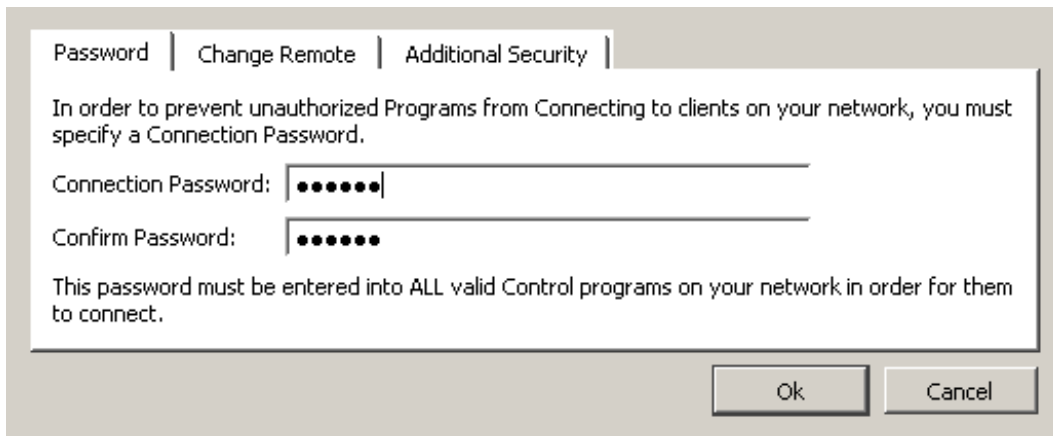During install, you will be presented with the following dialog box:

Enter your password in the edit box and repeat it in the re-enter password box. The password you set here will be encrypted and saved on the machine on which you are installing the software. This applies to both the tutor and client programs.

You must make sure that the connection password set on the tutor machine exactly matches that set on the client workstations to which you want the tutor to connect. Once you have set a connection password on a client workstation, only tutor programs with the identical password will be able to connect to that machine. Tutor programs with either no password set or a different password will not be able to connect.

It is also possible to create connection passwords through a silent install. See Download and Install.

Setting connection passwords later

It is possible to set connection passwords after the software has been installed. To do this, first make sure that you are connected to all the clients to which you intend to connect. When you are connected, select the clients on which you want to set the connection password then choose **Tools - Connection Security**. This will open up the following dialog box:
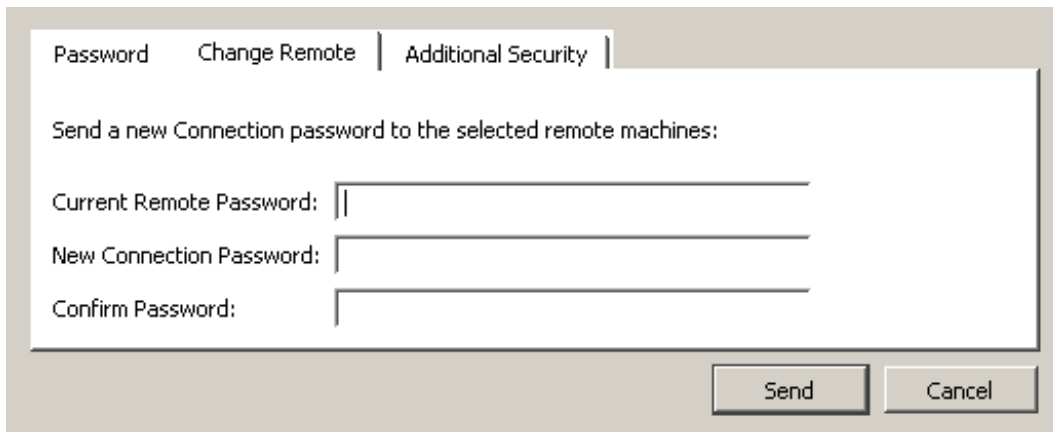

Enter the Connection password and re-type it in the Confirm box.

Press **OK** to simply change the password within this copy of AB Tutor program. The password will **NOT** be transmitted and set on any clients. This is mainly used if you have multiple connection passwords set on different client machines or classrooms.

To change the connection password on remote machines, select the machines you wish to push it out to, bring up the connection security dialogue and select the 'Change Remote' tab:


Fill in the details, then press **Send** to encrypt and transmit the new password to all selected and connected clients where it will be stored. Whenever any Tutor program connects to a client machine on your network, the Connection password is verified and if they don't match, then the connection status for that client will show 'Invalid Connection Password' and no access to that client is allowed.

In networks that have multiple Tutor programs installed that need to connect to the same client machines, each Tutor program **must** have the same Connection password.

Please note that due to limitations in the iPad, the client will initially be installed with a blank password. We recommend that this is updated as soon as possible from a Tutor, using the **Change Remote** option detailed above.

Security

Additional Security
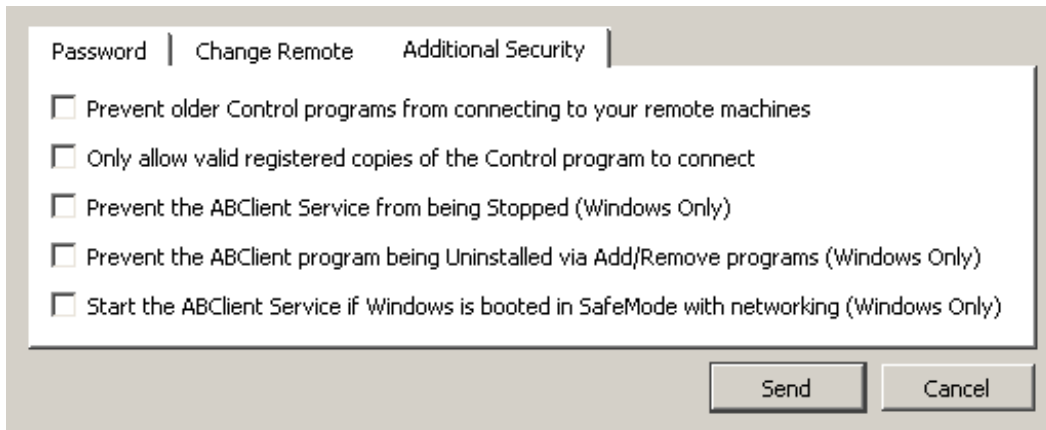
Prevent older AB Tutor programs from connecting and Only allow registered copies to connect

Unless you have very tight control over software installation on your machines/network, it is possible that trial copies or even older 'cracked' versions of the software can be installed and used to gain access to all your remote client machines. This can cause a serious security risk on your network. To prevent this you can optionally choose to prevent older versions of AB Tutor from connecting to your clients and/or only allow fully registered copies to connect. A registered copy is one that has been fully activated with AB Consulting via the Licence Management System (LMS).

Prevent the AB Client service from being stopped

Normally you should lock down the remote client machines so students are not able to access the Control Panel or the Administrative Tools etc. But in some instances students need administrative rights to the local machine. In these cases, you can further secure the remote client program by preventing the Client programs service from being stopped. If you select this option and 'Apply' it, then no one will be able to use the Windows interface to stop, pause or restart the service.

Prevent the AB Client program from being Uninstalled (Windows specific)

By selecting and applying this option, you can prevent the client program from being de-installed via the normal Add/Remove programs features of Windows.

Start the ABClient Service if Windows is booted in 'Safe Mode with networking' (Windows specific)

By selecting and applying this option, you can force the remote client program to start up even if it's booted up in 'Safe Mode with networking'.

⚠ Normally Safe Mode is there to resolve problems with your computer by not starting applications and services to give you a chance to fix Windows problems. Enable this option with caution!

Press the **Apply** to encrypt and transmit these settings to all selected and connected clients

where it will be stored. Whenever any Tutor program connects to a client machine on your network, the versions and/or registration details are verified and if they fail, then the connection status for that client will show 'Invalid Connection Password' and no access to those clients are allowed.
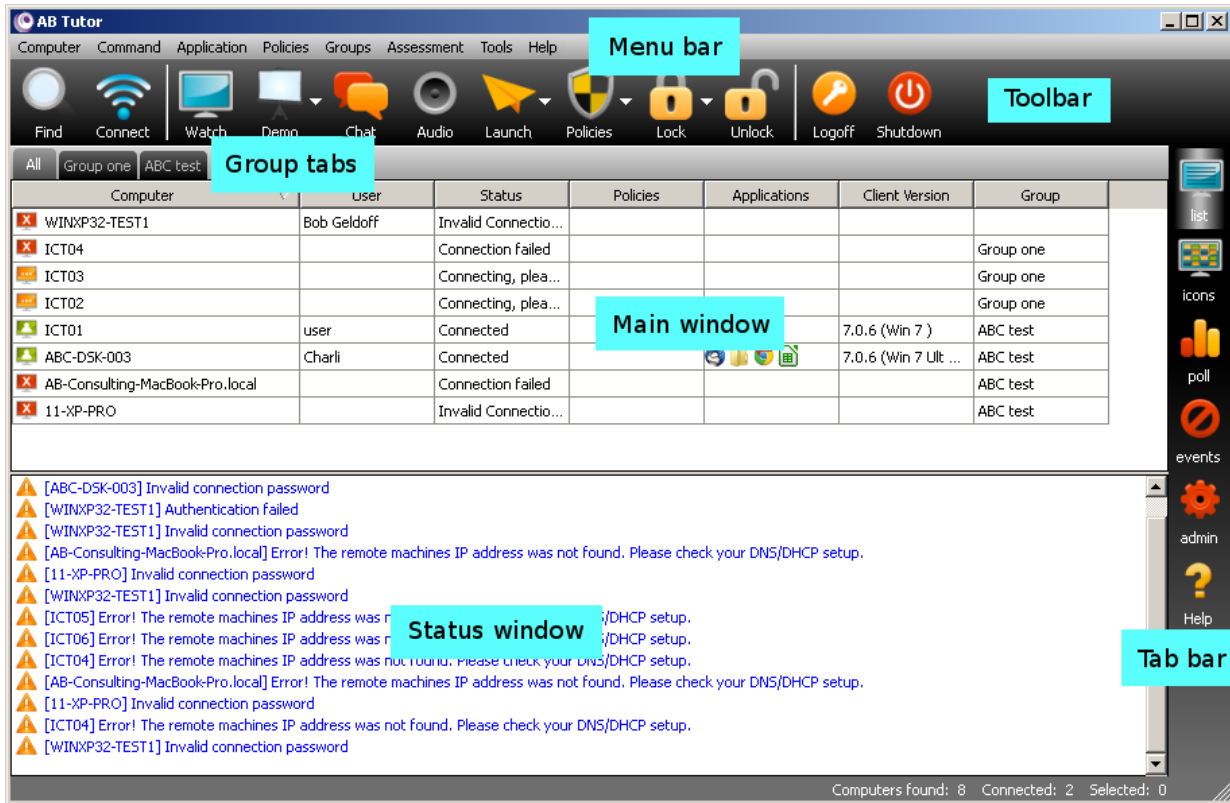
Group passwords

As an added security measure, it is possible for an Administrator to create group passwords. (See Group Connection Password)

Getting to know the interface

Depending on whether you are logged onto AB Tutor as tutor or administrator, you will be presented with slightly different interfaces:

Administrator Overview

Menu bar

The menu bar contains a series of drop-down menus that can be used to access various commands, tools and configuration utilities. These menus can change depending on your access level (e.g. Tutors do not see the Groups or Tools menus)

Toolbar

The Toolbar contains shortcuts to many of the most frequently used commands. Clicking on a button executes that command or action, eliminating the need to work through the drop-down menus. Positioning the cursor over an icon will display a brief description of its function in the Status bar and, if you pause the mouse, a tool-tip will appear, describing the command. It is possible to add icons to specific policies on the toolbar (refer to the section on 'Policies' for information on how to do this), so that you can apply restrictions and policies at the click of a button.

Group Tabs

The group tabs are a feature to allow administrators to manage a large number of computers more easily. If <All groups> is selected from the find menu, tabs will be shown for all the defined groups, allowing easy access to any computer in the school.

Main Window

This window displays a list of the currently found workstations. The default view shows an overview of the computer's status and what is currently happening with it:

- the computer name
- the logon name and real name of the current user
- the connection status (see 'Status' table below)
- policies currently applied (see 'Policies' table below)
- applications/files currently running (the dotted red box indicates that this is the one in focus at the time)
- the version of the AB Tutor client currently running on the machine
- the group (if any) that computer is in

Hovering the mouse over any workstation icon in any view mode will display a pop-up tool-tip showing the current information/status of that computer. Hovering over any policy or application icon will show the name of that policy or application.

If AB Tutor is being run in administrator mode, it is possible to have multiple groups displayed as tabs at the top of the main window, allowing easy viewing and administration of a large number of machines.

Tab Bar

Allows you quick access to the following features:

Icon View

Allows you to change the view in the main window to show each workstation as a large thumbnail of that computer's screen, labelled with the computer's name. This view allows you to move each icon within the window to a different position by using the mouse. This is often used with a classroom layout image set as the background.

Depending on the scale of icons used in this view, running applications and active policies can also be displayed, giving almost as much information as the standard list view.

Question Polling

Enables you to send simple questions to the remote users and process the answers they give.

Event/Violations

If a Keyword Monitoring policy has been applied to the remote machines, then whenever an event/violation occurs, any connected Tutor program are immediately notified.

Administrative Tools

Gives administrators access to some advanced functions to administer the remote machines.

Status Window

This is simply used to output information, warning or error messages whilst using the program. For example, if the connection to a remote computer is lost, then a message is output to this window informing you what has happened. Many of the error messages are hyper-links to the AB Tutor knowledgebase, which will give you more information about the error message and how to handle it.

To hide/show this window, right-click the mouse within the main window and tick/untick **Show Status Window**. You can also clear the messages by right-clicking the mouse in the status window and selecting **Clear** from the drop-down menu.

Status Bar

The Status Bar is displayed at the bottom of the AB Tutor Window. It is used to show information about selected menu items or buttons, the current group being watched, the number of found workstations, the number of connected workstations and the current date and time.

Getting to know the interface

Understanding the icons

The table below shows the different status icons that you will find in this window, and what they mean.

Status of remote computers	Single Computer	Thin Client Session
Computer found, but not yet connected		
Attempting to connect or re-connect to computer		
Connected to computer, no user logged on		
Connected to computer with user logged on		
Connection to computer failed (including after shut down)		

The table below lists the default icons relating to policy types

Policy types	Single Computer
Port blocking for complete Internet block	
Website blocking	
Application blocking	
USB/CD/Floppy drive blocking	
Print blocking	
Privacy	
Keyword monitoring	
Logging (activity, printing, websites, applications)	
Mute sound	
System actions (e.g. shut down)	
Lock computer	
Screen capture	
Group of policies	

Getting to know the interface

Console as seen by a Tutor

The Tutor Console is identical to the Administrator Console, except that the Groups and Tools menus are not available, nor is the Administrative Tools tab. The administrator is able to disable further functionality:

Getting to know the interface

Icon watch view

Click on the tab to reveal a window which will show a series of thumbnail views of the screens of remote computers. The remote screens will only be displayed when you connect to those computers. If you have not connected or there is a connection problem, then the normal computer state icons will be displayed.
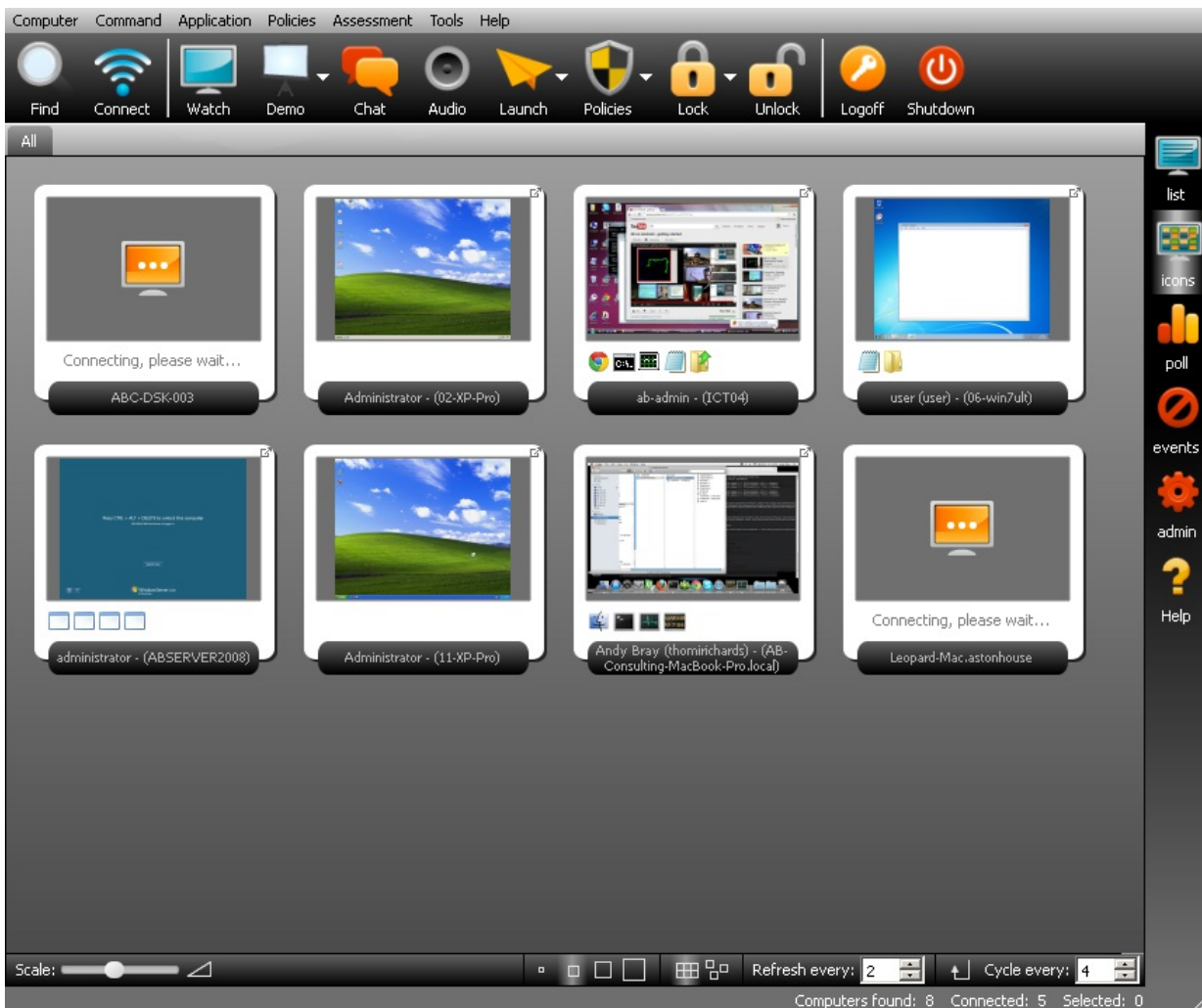
In this view, you have the same icons as in the list view across the top of the window. These give you control over the connected clients and allow you to start programs, apply policies etc. The main window shows thumbnails of all the machines in the current group.

The icons along the bottom of the main window allow you to change the size of the thumbnails. The **small**, **medium**, **large** and **extra large** squares in the middle change the size and also the level of detail shown. Fine adjustment can be made by dragging the **Scale** slider in the bottom left of the screen. The next two icons allow you to choose between automatically aligning the thumbnails to a **grid**, or allowing them to be **moveable**, perhaps to mirror the layout of your classroom (see the groups page for more detail).

The thumbnail **refresh** rate can also be changed. By default, the screens are refreshed every 5 seconds. If you want faster updates (which will increase network traffic) then reduce the number

of seconds between updates. Finally, the **cycle** option will automatically page through the displayed thumbnails, allowing a teacher to keep an eye on a whole class. In order to use the cycle mode, select the **Fixed Grid** option, size the icons appropriately and click the **cycle** button. AB Tutor will automatically scroll down every few seconds, with the delay set in the bottom right.

⚠ Ensure that the **refresh every** option is set lower than **cycle every** or you may end up with blank thumbnails.
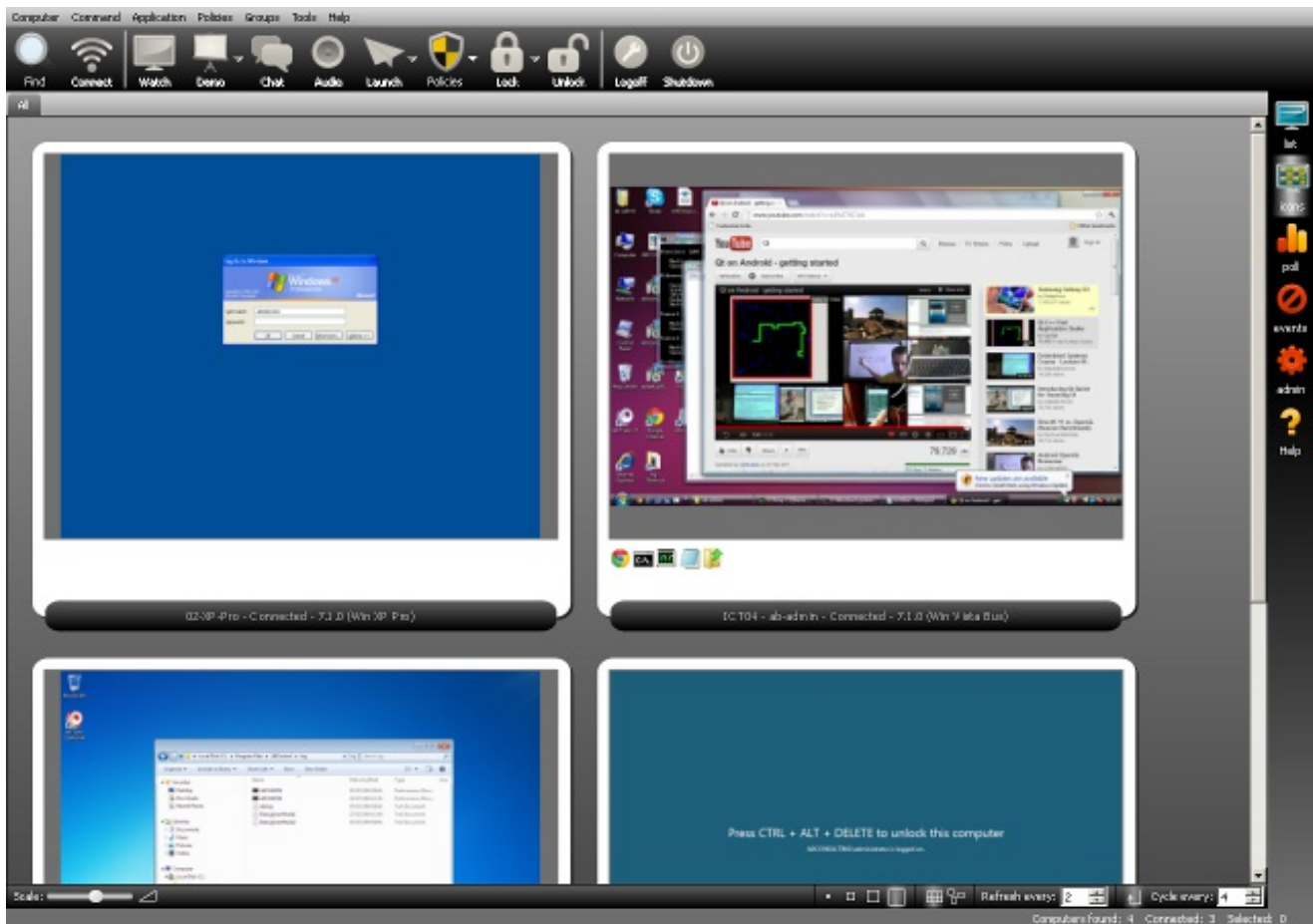
Shift+click a thumbnail to enlarge it - this is especially useful if you have a large number of computers, and are using very small thumbnails. Double-click on a thumbnail to issue a normal Live Watch of that remote machine.

Right-clicking on any thumbnail will pop up a menu giving you direct access to issue commands to that remote computer. (e.g. Snapshot, chat, lock, shutdown etc).

ℹ Thumbnail layouts are stored as a per-user setting in the registry by default. If you wish to have multiple users on the same computer share the thumbnail layout, tick the box in the group manager, on the **General** tab.

Getting to know the interface

Events and Violations

If a Keyword Monitoring policy has been applied to the remote machines, then whenever an event/violation occurs, any connected tutor programs are immediately notified. A popup notification will be shown from the system tray icon as shown. There is an aditional notification inside AB Tutor where the events are shown in red text in the main Tutors status window and the status text in the main view also turns red. A count of the events during the session is shown in brackets.

To see the details of the event/violation, double click the mouse on the red event line in the bottom status window. This opens up the Event view on the right.

Details of all events that have occurred during the session are shown in the top part of the pane. If you select an event, then a screen shot (or video recording) is displayed in the bottom half of the pane. If the remote screen shot is a little too small to see clearly, then you can double-click the image to toggle from a small view to full screen and back.

In some cases a tutor may have set the policy so that screen recording happens for a specified time period after the violation. You will not be able to view this recording until it has finished. Click on the View Log File... after a period of time to see if the video file is available yet.

Here it is possible to see screenshots/recordings of all violations as well as other log files. A small floating window will show any associated screenshot or video clip. This window has two size settings and can be toggled between them by double clicking.

Getting to know the interface

Administrative Tools

Select the ⚙ tab to access four administrative tools. All these administrative tools work on the selected computers in the Main window and are available to administrators only:

Inventories

It is possible to view a detailed inventory of various hardware/software components for either a single computer or for multiple computers.

To obtain an inventory:

- Select the one or more machines in the main window
- Press the Refresh button

Inventory	Processes	Services	Command Prompt

	10-XP-Pro
Inventory Summary for:	10-XP-Pro
Date:	Fri 23, Nov 10:44:32 2012
Domain:	
System:	Model: HP dx5150 SFF Manufacturer: Hewlett-Packard Type: AT/AT COMPATIBLE
Operating System:	Microsoft Windows XP Professional 5.1.2600 Service Pack 3 Serial No:
Registered User:	User
Language:	English
AB Client Version:	7.1.3
MotherBoard:	Processor: AMD Sempron(tm) Processor 3200+ Proc. Type: x86 Family 15 Model 47 Stepping 2 No of Cores: 1 Memory 1: 256.0 MB Memory 2: 256.0 MB
Disk Drivers:	C: (Local Fixed Disk) Free: 228.17 GB Size: 233.75 GB D: (CD-ROM Disc)
Monitor/Video Adaptor:	Monitor1: 1280x1024
Sound Cards:	1: Realtek AC97 Audio

Network Adpators:	1: Broadcom NetXtreme Gigabit Ethernet - Packet Scheduler Miniport
	    DHCP Server:
	    DNS Server: {
	    IPAddress: {"
	    MACAddress:

Printers:	1: Brother HL-4150CDN series

If multiple computers have been selected, then you will get a message asking you to wait a few seconds. Then to view each inventory file, select the computer from the drop down **History** list.

Each time you select a machine in the Main Window, the History list is populated with previous inventories for that computer.

All inventory files are stored in a folder specified under **Tools - Settings - Folders**. Inventory files are stored in simple HTML format and so you can also view these files within any Web Browser by going to this folder and double-clicking on the inventory file.
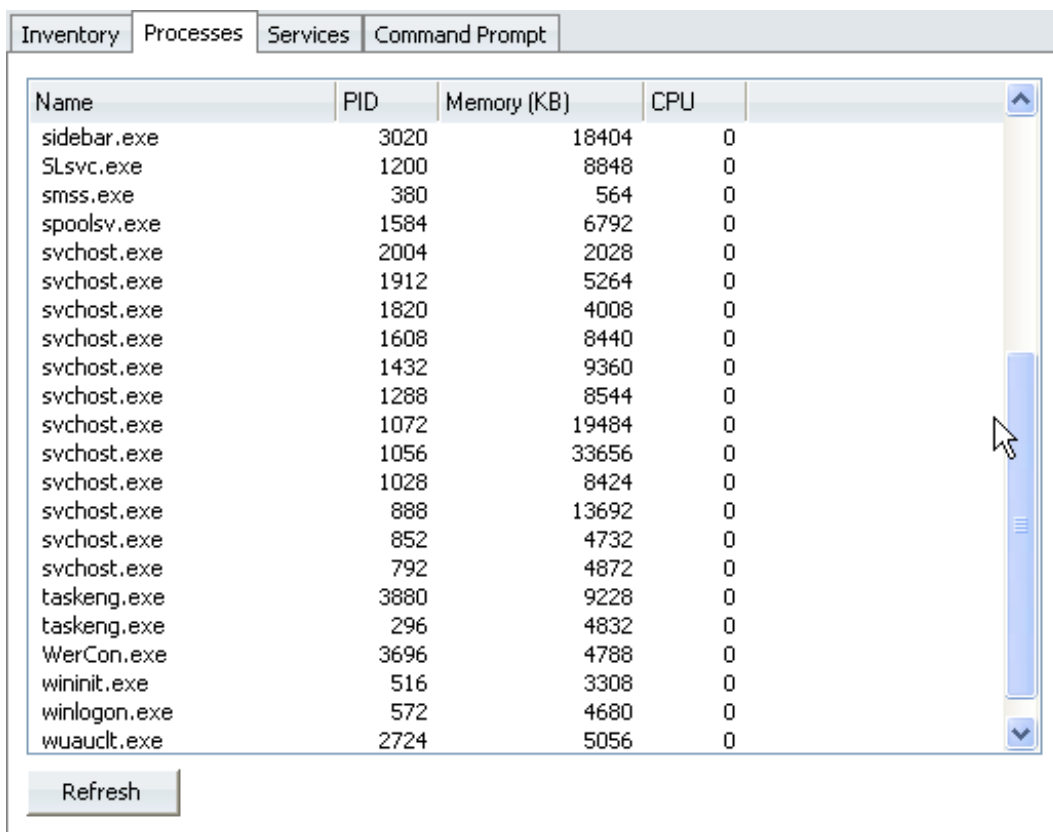
Process management tool

This tool allows you to view all processes running on a remote computer. This can only be done on one remote computer at a time. If you have multiple computers selected in the Main window, then the Refresh button will be disabled.

Once you have pressed the **Refresh** button for the first time, then the list will automatically refresh every 4 seconds.

If you want to forcibly end a remote process, right-click on the process to end and select **Kill this process**.

⚠ If you are killing a remote application then it will terminate it immediately and not prompt the user to save any work.
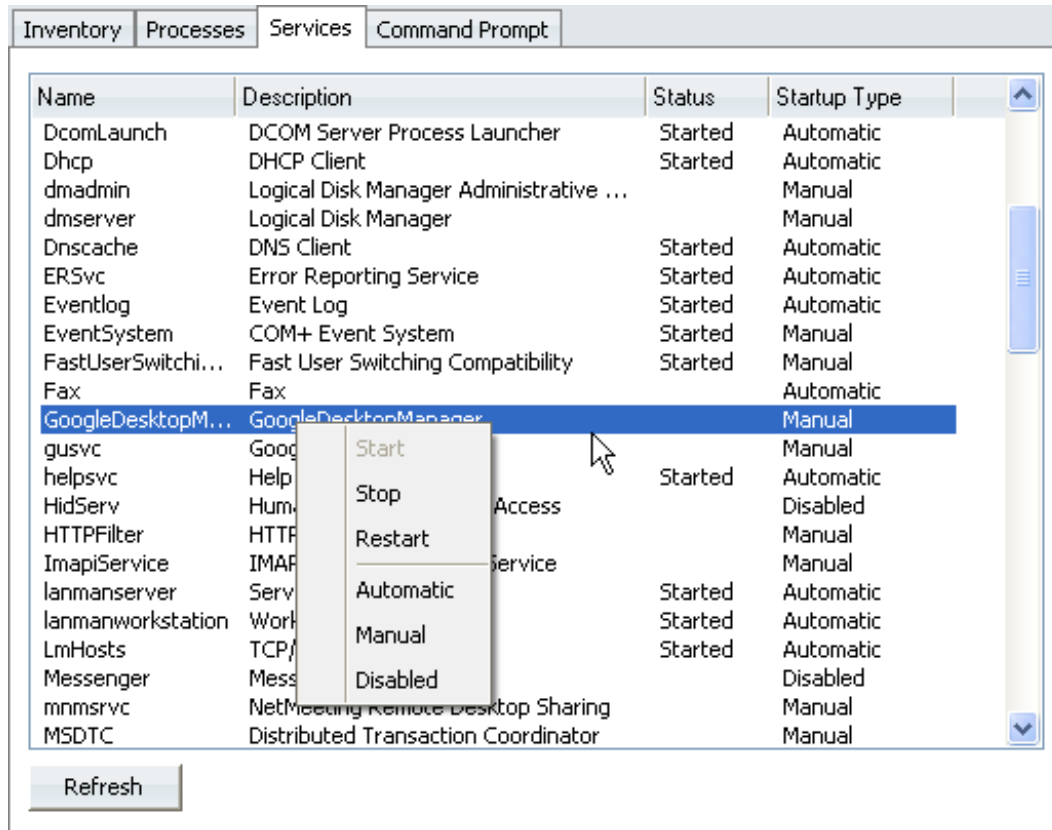
Name	PID	Memory (KB)	CPU
sidebar.exe	3020	18404	0
SLsvc.exe	1200	8848	0
smss.exe	380	564	0
spoolsv.exe	1584	6792	0
svchost.exe	2004	2028	0
svchost.exe	1912	5264	0
svchost.exe	1820	4008	0
svchost.exe	1608	8440	0
svchost.exe	1432	9360	0
svchost.exe	1288	8544	0
svchost.exe	1072	19484	0
svchost.exe	1056	33656	0
svchost.exe	1028	8424	0
svchost.exe	888	13692	0
svchost.exe	852	4732	0
svchost.exe	792	4872	0
taskeng.exe	3880	9228	0
taskeng.exe	296	4832	0
WerCon.exe	3696	4788	0
wininit.exe	516	3308	0
winlogon.exe	572	4680	0
wuauclt.exe	2724	5056	0

Refresh

Click on the column heading to sort the list alphabetically or numerically.

Running services tool

With this tool, it is possible to view all the remote services running on a computer. Like processes, it only works on a one computer at a time. If you have multiple computers selected in the Main window, then the **Refresh** button will be disabled.

You can use this tool to start, stop and re-start remote services. Right-click on any service to show a popup menu with the commands you are allowed to issue.

Click on the column heading to sort the list alphabetically or numerically.

Command prompt

This option allows command line instructions to be sent to the client machine. For Windows, this tab allows you to send DOS based commands to one or more selected remote machines, and Bash commands for Mac clients.
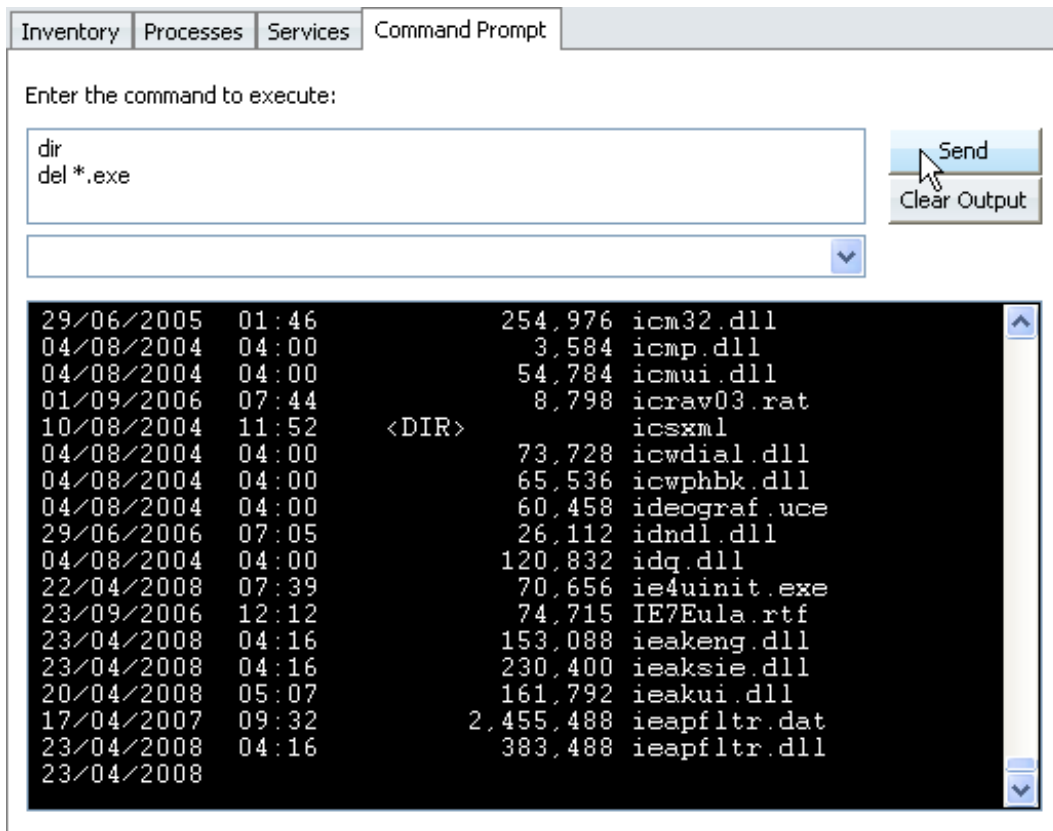
To send a command:

- Select one or more computers on the Main window
- Enter the command to execute (Multiple commands can be entered by holding down the Ctrl key and hitting return to get to the next line.) Commands are executed in sequence top to bottom and one per line.
- Press the **Send** button

If you are sending the command to a single remote computer, then the output from the command is immediately displayed. If you have sent the command to multiple machines, then to view the output for each machine, you need to select that machine only in the Main Window.

A history of previously sent commands is stored and can be retrieved from the drop-down list.

Using AB Tutor

Computer menu

Find

Toolbar:

Menu: **Computer - Find**

This command will populate the main view with computers. As an administrator, you have the option to use "<Discovery>" which will search for all the workstations found on the network and specified in the network configuration, or load up one or all groups. Tutors will only have access to the groups. This command can be automatically issued each time you start AB Tutor. (See **Tools - Settings - General** to set this option.)

Connect

Toolbar:

Menu: **Computer - Connect**

This command will connect to all computers highlighted in the found computer list. If a connection is lost due to a re-boot, unplugged network cable or a temporary network failure, you can re-connect by highlighting the unconnected workstation and pressing the Connect option. Although it is possible to connect to a very large number of computers simultaneously, we would not recommend more than 50 concurrent connections from a single machine as this may cause bandwidth problems with resultant deterioration in network performance.

Rename Computers

Menu: **Computer - Rename**

This menu item allows computers to be renamed, to turn a cryptic hostname into a more recognisable friendly name. Note that this will not change the hostname of the target computer, AB Tutor will simply change the name which is displayed inside the software.

Computers can also be renamed by pressing **F2**.

Remove Computers

Menu: **Computer - Remove**

This menu item can be used to remove unwanted computers from the list.

E.g. If a remote machine is powered off, you don't want to accidentally select this computer in the list and issue a command to it as this will pause the program as it tries to connect but fails and eventually times out. It is good practice to remove computers from the found list if you no longer need to monitor them.

Using AB Tutor

Computer menu

Restart ABClient

Menu: **Computers - Restart Client**

This option can be used to restart the abclient service on the client machines. This is designed to force a reinitialise and reconnect if the client stops responding properly. There are two different mechanisms for restarting the client which work in different ways. These options are only available for admins.

Power On Computers

Toolbar:

Menu: **Computers - Power On Computers**

This is an advanced feature: it requires a certain amount of technical knowledge to enable the remote computers to accept the Wake-on-LAN command.

The remote client workstations must have a Wake-on-LAN network adapter and a BIOS that will support it. You must consult the network adapter and machine's hardware manuals for information on setting this up.

To issue this command from within AB Tutor program requires some initial setup.

1. You must have found and been connected to all machines you wish to power on at least once before.
2. Since machines that are turned off cannot be found by the AB Tutor program, you must add the machines to a Classroom Group (See Groups).
3. At start-up (or after pressing the **Find** button) you must select the Group to connect to. This will add all computers to the list even though they can not be found by the network scanning (since they are off!).
4. Highlight the machine you wish to power on and select the **Computer** menu followed by **Power On**.
5. A special Wake-on-LAN command is broadcast to the remote machines network cards and, if they have been configured correctly, the machine will be switched on.

Using AB Tutor

Command menu

Live Watch

Toolbar:

Menu: **Right click - Watch** or **double click**

This command allows the tutor to view a selected workstation screen in live mode.

To View a workstation

1. Select one or more clients to view.
2. Press the Watch button or select the Command menu followed by Watch or right-click the mouse on one of the client icons and select Watch from the drop-down menu.

Whilst Watching client workstations, the toolbar will be available at the top of the client screen. Click on the handle or a blank part of the bar to hide it and click on the handle at the top of the screen to unhide it.
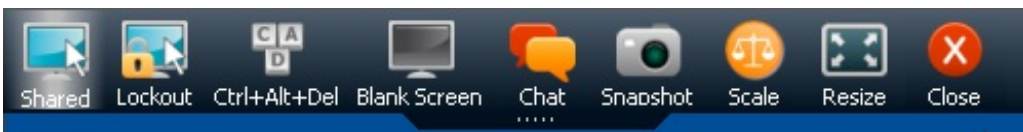
Shared

When this button is pressed, it enables you to take control of the currently viewed workstation and allows the student to also use their mouse and keyboard at the same time.

Lockout

When this button is pressed, it enables you to take control of the currently viewed workstation and disable the student's mouse and keyboard. Please note that the intention here is not to completely lock the student out - for that option, select the Lock function.

Ctrl+Alt+Del

This will send a Ctrl+Alt+Del command to the workstation to activate the Windows login or security screen.

Blank Screen

This simply blanks the screen for the client, but not the tutor (optionally displaying a message), allowing the tutor to do things on the client machine without the user seeing it.

Chat

Press this button to initiate the Chat window to send and receive text messages with remote client workstations.

Snapshot

Pressing this button whilst viewing a remote screen will take a screen shot and automatically save the image to file. The location and resolution of this image can be set by the Administrator in the Settings menu.

Scale

Pressing this button will shrink the remote view to fit in the current window size. If the window is significantly smaller than the resolution of the student workstation, it can be tricky to read text on the screen. If this is the case, make the window bigger.

⚠ Note that scaling can reduce the performance and refresh rate. Actual size will run more smoothly.

Resize

This button toggles between windowed view and fullscreen view.

Close

Close the window and end the Watch session.

Using AB Tutor

Command menu

Give Demo

Toolbar:

Menu: **Command - Demo**

This command will show the tutor's workstation screen to all selected student workstations. This can be used to demonstrate to the entire class how to use the computer or an application etc. When this command is activated, the AB Tutor window is minimised.

The tutor's screen will only be shown to the student workstations selected.

To end the show session, you simply click on the minimised **ABTutor** in the system entry in the taskbar. This will re-display the application and removes the tutor's screen from all student workstations.

There are 2 modes you can use when showing your screen to the students: **Full Screen** or **Thumbnail Window**. Click the small down arrow symbol to the right of the main Demo button to reveal the following drop-down menu:
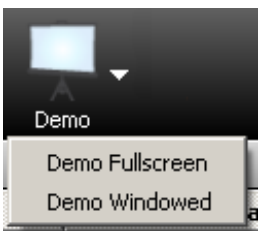
Full Screen (the default action for the **Show** button), will show your screen in actual size on all the selected remote machines and lockout the student's keyboard and mouse.

Thumbnail Window will show the tutor entire screen in a small 1/4 sized scalable window on the remote screen. The student can then continue to work on their computer whilst watching the tutor screen at the same time. Clicking the drawing pin in the thumbnail window will make sure that the window is always on top of other applications.

Using AB Tutor

Command menu

Exhibit

Toolbar: ⭐

Menu: **Command - Exhibit**

This command allows you to display a student's screen to other connected students.

Please note, this icon is not added to the toolbar by default. You can add it yourself by going to View, Customise...

To Exhibit a remote client:

1. Select the remote workstation to exhibit
2. Select Command - Exhibit (or click on the exhibit icon)

Select the remote client machine(s) you wish to exhibit 'Administrator' (ICT02) to:

Computer ▽	User	Status
✅ ICT04		Connected
🔺 ICT03	ABConsulting	Connected
✅ ICT01	user	Connected
⬛ ABC-DSK-002	Maha	Not connected

This command will 'Watch' the exhibit client and 'Show' your screen to the selected clients above. To end the exhibit, right click the AB Tutor icon in the system tray and select 'End Show'.

[Start] [Cancel]

3. Select the other remote workstations to which you wish to exhibit (Notice that you cannot select the workstation you are exhibiting)
4. Press Start

The workstation you are exhibiting will be displayed on your screen and you are then put straight into a Show command.

This allows you to see the exhibited screen, to take control of it and use the Annotation tools available during a normal Show command.

To end the Exhibit mode press the Close button ❌ on the toolbar and then the AB Tutor entry in the taskbar.

Command menu

Launch

Launch is covered in the [Application](#) section.

Using AB Tutor

Command menu

Chat

Toolbar:

Menu: **Command - Chat**

This command will display a dialog box allowing the tutor to send a text message to all selected students. The tutor can then wait for a reply back from the student(s).

To send a message:

1. Select the remote workstation(s) to which you want to send the message.
2. Enter your name. This lets the remote user(s) know who the message is from. (This name will be remembered for all subsequent chat sessions).
3. Enter the message you want to send.
4. Press the Enter key or Send button.
5. Wait for replies to appear.

Using AB Tutor

Command menu

Audio Chat

Toolbar:

Menu: **Command - Audio**

This command will display a dialogue box allowing the tutor to have an audio conversation with a remote student via a microphone and speakers. This function will only work if both the Tutor machine and remote workstations have audio capabilities (i.e. a sound card with a microphone and headphones or speakers attached).

Two Audio commands are available:

- **Broadcast**: You can select one or more workstations to which you want to send an audio announcement, but the students are not able to reply.
- **Two-way Chat**: You can instigate a two-way audio conversation with the remote student.
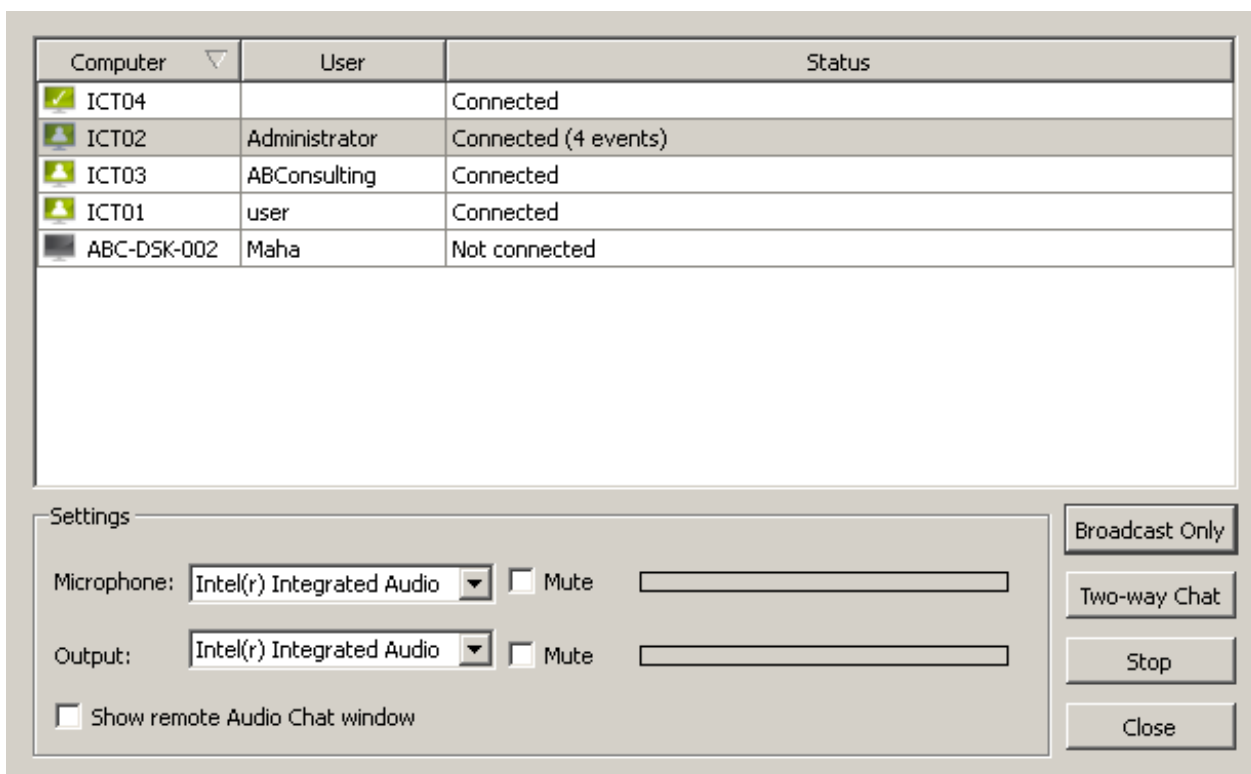
To Broadcast a message:

1. Select the remote workstation(s) you want to send the audio message to.
2. Press the Broadcast button.

To have a two-way conversation:

1. Select the remote workstation you want to talk to.
2. Press the Two-way Chat button.

Press the Stop button to end the audio session.

The Audio dialog box will remain open allowing you to use other features. (E.g. you can have an audio conversation with a remote student at the same time as viewing/controlling their screen.)

Settings:

You can mute the audio output at any time by clicking the Volume Mute button. You can also adjust the master volume control by click on the slider and moving it left (quieter) or right (louder).

This has the same affect as adjusting the volume control from within your system tray (the Speaker icon bottom right).

Press the Microphone mute button to disable your microphone whilst still enabling you to listen to the remote student.

Audio Devices:

AB Tutor uses the default audio devices for input and output. If you have multiple audio output devices (e.g. headphones and speakers), then you need to set the default. (eg, in Windows; right click on the Speaker icon in the Windows system tray and select 'Adjust Properties'.)

Using AB Tutor
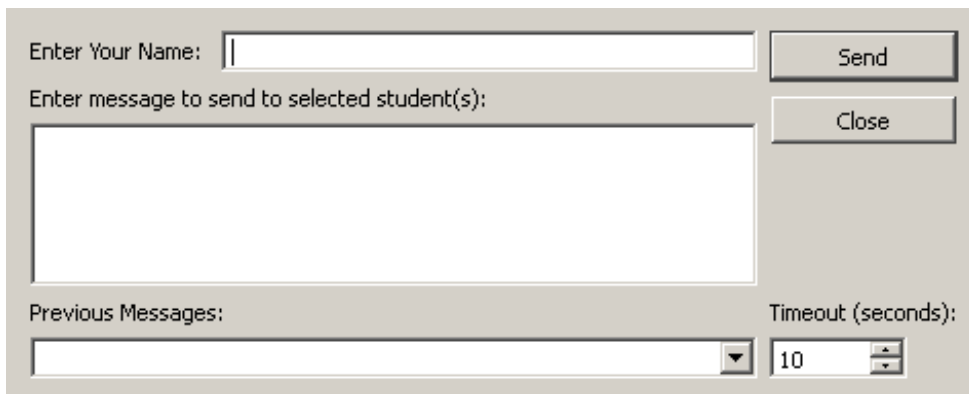
Command menu

Send Message

Toolbar:

Menu: **Command - Send Message**

This command will display a dialog box allowing the tutor to send a simple text message to all selected students. The message is displayed on the students' screen in the form of a simple message box with an OK button to clear the message. You can force the remote message box to close after a given number of seconds.

To send a message:

1. Select the remote workstation(s) to which you want to send the message.
2. Select the 'Send Message' menu or button on the toolbar.
3. Enter your name. This lets the remote user(s) know who the message is from. (This name will be remembered for all subsequent chat/sending messages).
4. Enter the message you want to send.
5. Alternatively, select a previously sent message from the drop-down list.
6. Enter the number of seconds you want the message box to remain visible. (Enter 0 to disable the timeout feature. Then, the only way to remove the message box is by pressing the OK button).
7. Press the **Send** button

Each time you press the Send button, the system also adds the message to the 'Previous Messages' list for subsequent selection.

Using AB Tutor

Command menu

Snapshot

Menu: **Command - Snapshot** or **Right click - snapshot**

This command allows the tutor to take a snapshot of the selcted computer's desktops which will be saved in the event log. Multiple computers can be selected and snapshots taken simultaneously.

Record

This command records any activity on the client's desktop for the specified time. The Tutor can set the desired record time and frame rate, and whether the user's details are printed on the video. Note that the available frame rates are all low to save space, and that large amounts of recording could fill hard drives.
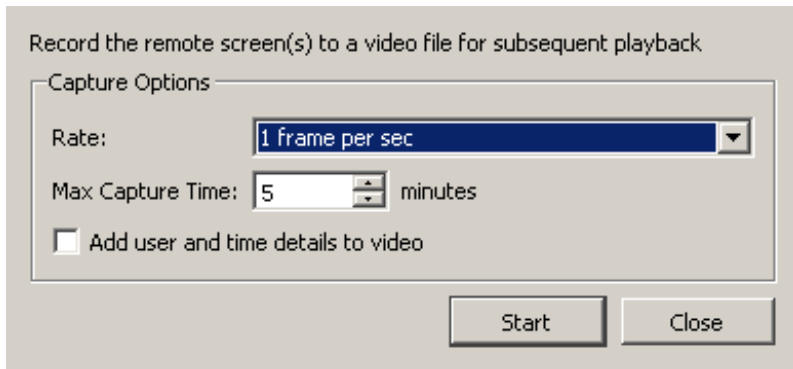
Once created, snapshots and videos will show in the status window, and if double clicked will open the event viewer in the right hand side of the screen. From here, individual events can be displayed by selecting them in the top panel and videos can be played using the on screen controls. Double click a video/screenshot to pop it out into its own window, which can then be resized.
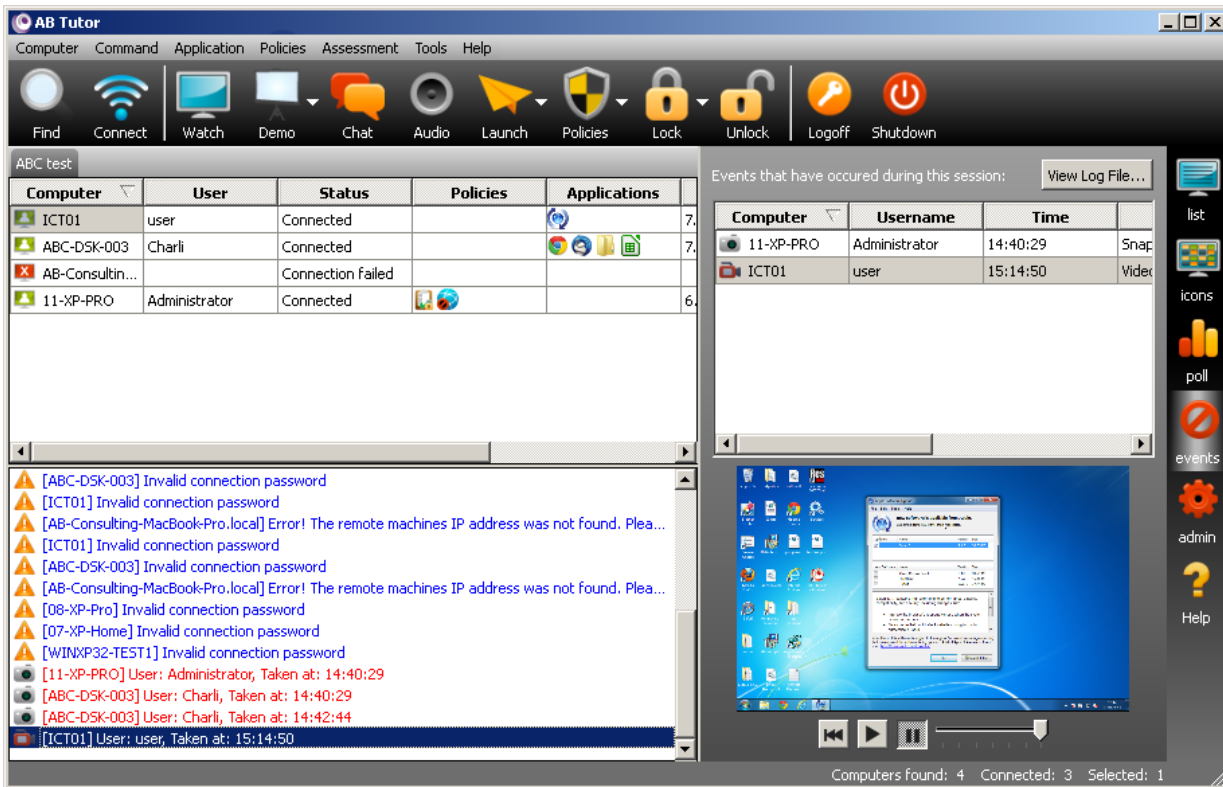
To see events from before the current session, click the "view log files" button to open the log file viewer

Using AB Tutor

Command menu

Request Student Name

Menu: **Command - Request Student Name**

Some schools or organisations use a common shared account to logon to Windows for each machine. This makes if difficult to identify who is using which machine. By sending this command to a remote workstation, the user is asked to enter their name which will be shown in the 'User' column next to the computer name. The following dialog box is displayed on the remote user's computer asking them to enter their name.
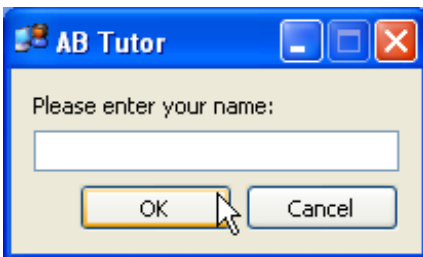
Once the command has been issued by the tutor program a '?' will be displayed until they have enter a name and pressed the Send button. This enables you to know who has yet to give a name.

Computer	User	Status
ICT01	? (user)	Connected
ICT02	? (Administrator)	Connected (4 events)
ICT03	? (ABConsulting)	Connected

After users have entered their names:

Computer	User	Status
ICT01	Joe Bloggs (user)	Connected
ICT02	John Smith (Administrator)	Connected (4 events)
ICT03	Ann Other (ABConsulting)	Connected

 There is no name validation done, so it is up to you to police the validity of the student's entries.

Using AB Tutor

Command menu

Lock

Toolbar:

Menu: **Command - Lock**

The tutor can quickly lock the students' keyboard and mouse to ensure that the student workstations are not used whilst a demonstration/lecture is being given. The remote workstations' screens will be blanked and a message displayed. The default message is 'Attention please!', but this can be changed or set to a picture in the **Configuration** options (**Tools**/**Settings**/**Lock Message**).

Highlight the student workstations to lock before selecting this function. Normal Windows multiple selection functions apply (e.g. Hold the Ctrl key down and click multiple items, or select a range using the left mouse button and shift, or press ctrl+A to select all).

All locked computers are indicated in the status column as **Locked**.

It is possible for teachers to create their own lock messages and save them to be reused later.

Press the 'down arrow' next to the lock button image and select '**Lock Messages...**'
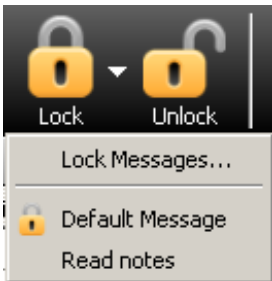
This shows the following window.
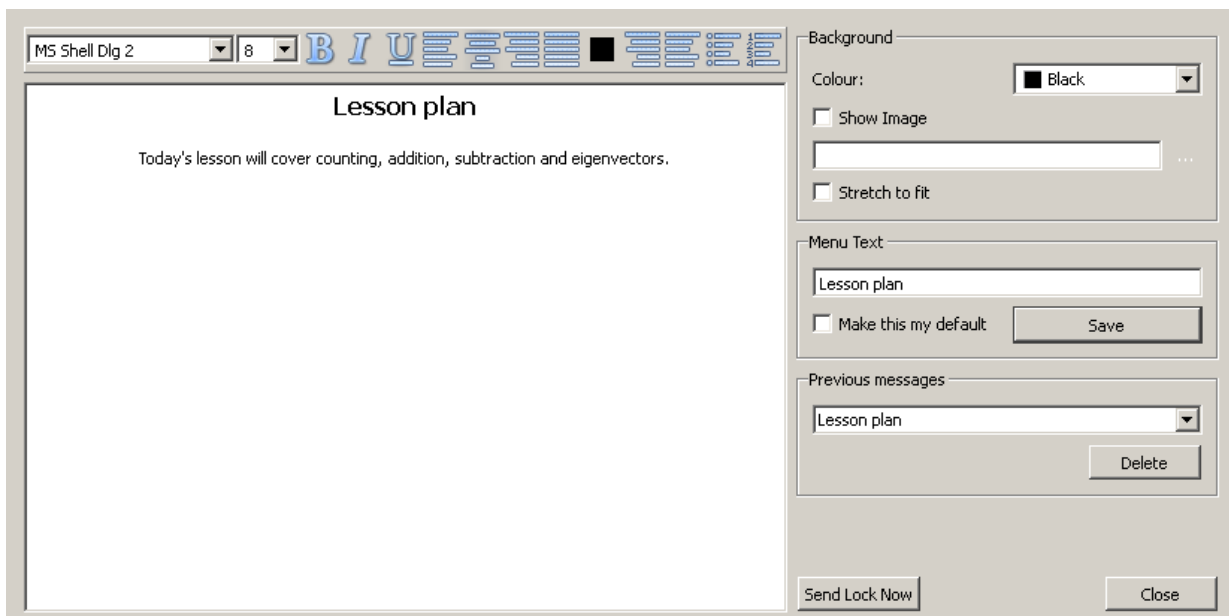
Enter your text in the box on the left and use the formatting buttons to set the text attributes (e.g. Font, size, colour, alignment, lists etc.)

To save this message:

- Enter a short name in the 'Menu Text' box and press **Save**.
- Tick the option '**Make this my default**' to apply this message whenever you simply press the lock button or select 'Lock' from the commend menu. (This overrides the default system lock message and only one message can be set as the default.)

Previously saved messages can be displayed by selecting the required message from the 'Previous messages' drop-down box.

To delete a previous message:

- Select the message from the drop-down list
- Press the Delete button
- Confirm the delete action by selecting Yes

To apply a previous message, select the down arrow next to the lock button and pick the message to send from the menu.

Unlock

Toolbar:

Menu: **Command - Unlock**

This will unlock previously locked remote workstations.

Highlight the student workstations to unlock as described above before selecting this function.

Using AB Tutor

Command menu

Send Files

Toolbar:

Menu: **Command - Send Files...**

This enables the tutor to send one or more files in a directory to all selected student workstations. On selecting this command, the following dialogue box is displayed.
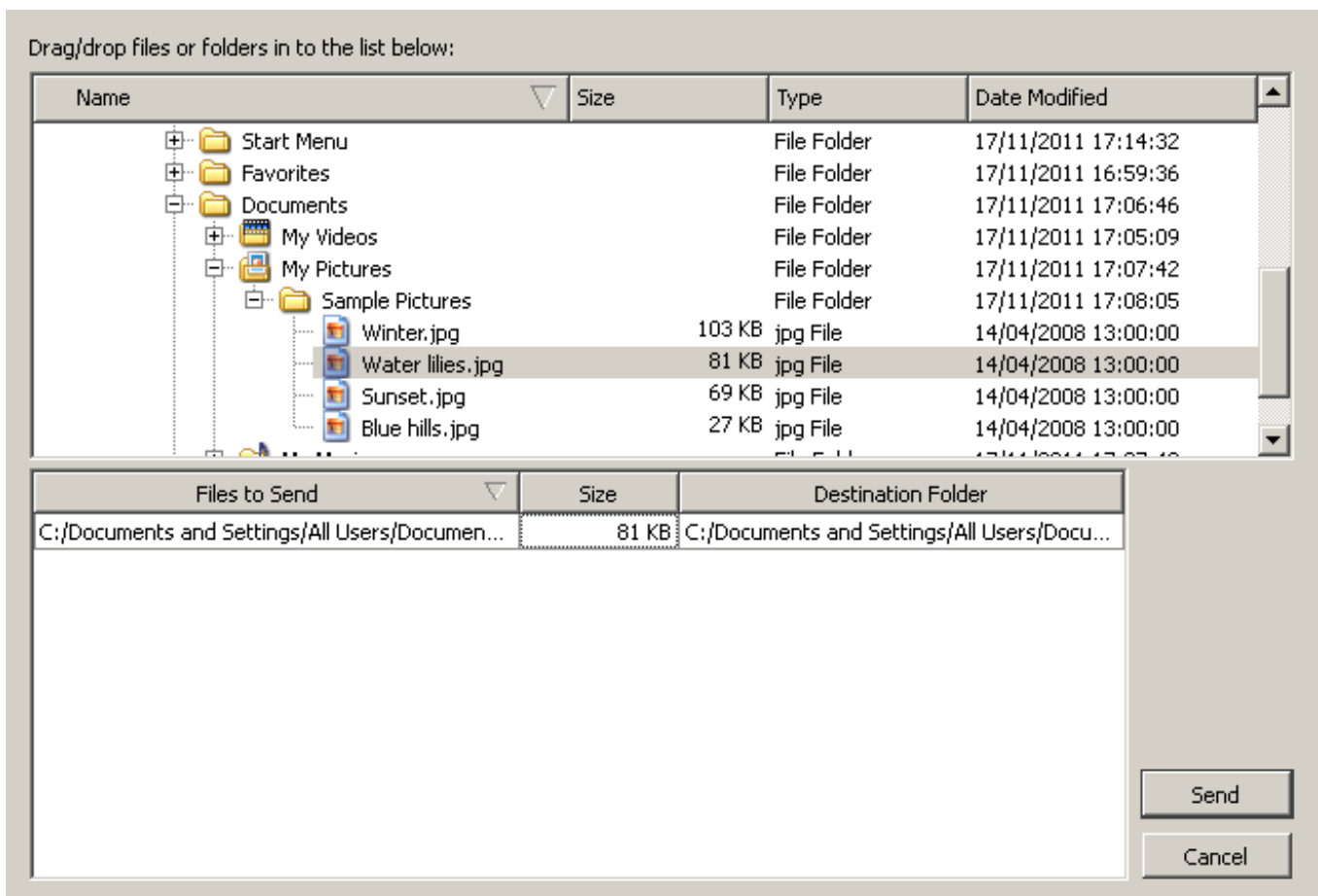
- Use the folder list on the left to browse to the required directory that contains the files you want to send.
- Select one or more files from the **files list** on the right.
- Click and hold the left mouse button on the selected files and drag and drop them into the **Files to Send** list below.

- To change the Destination folder to which the files will be sent, either double-click the mouse on the file or right-click and select **Change destination folder**.
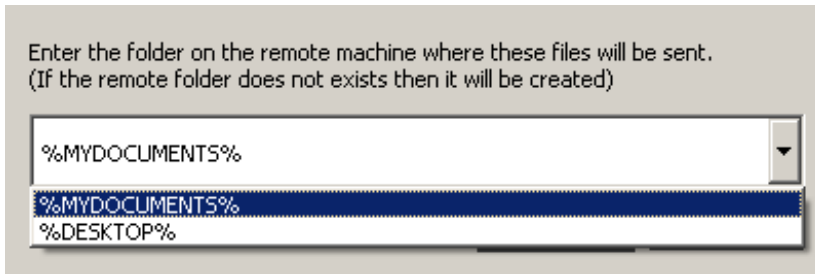
Select %DESKTOP% from the drop-down list to save this file to the remote user desktop or %MYDOCUMENTS% to save it to the users personal folder.

- Continue to add all the files you want to send
- Press the **Send** button to start sending the files to the selected workstations

Files can be removed from the Send list by right-clicking the mouse and selecting **Remove from list**
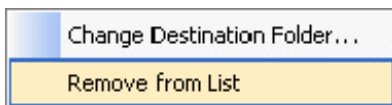
By Dragging/dropping a **folder** from either the folder view or file view, **all** the files contained in that folder will be added to the Send file list. Files within sub-folders will **not** be added.

The Send Files dialog window can be re-sized and the windows within the dialogue re-sized to optimise the file/folder views.

Using AB Tutor

Command menu

Transfer Files

Toolbar:

Menu: **Command - Transfer Files...**

This enables the tutor to send/receive one or more files or folders to a selected student workstation. On selecting this command, the following dialog box is displayed
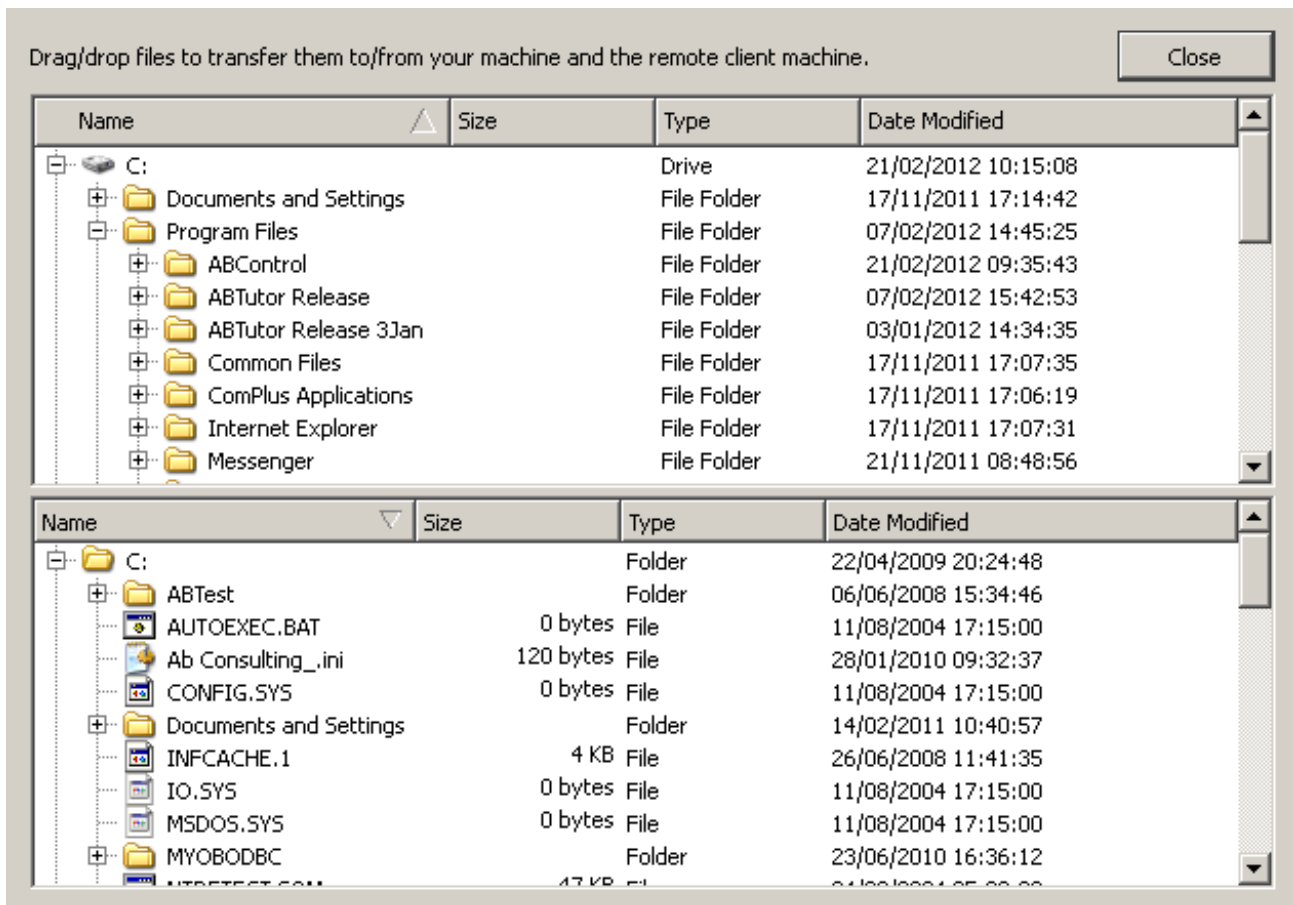
The top half of the dialog box shown the directory and files on your current machine and the bottom half shows the folders and files on the remote workstation.

- Browse to the local folder by using the top left folder view. When you select a folder, the files within that folder will be displayed on the right.
- Browse to the required remote folder using the lower left window.
- Select one or more files from either the local files list or remote and drag/drop to the other file list window.
- If a file exists, you will be prompted to confirm the overwrite operation.

Using AB Tutor

Command menu

Collect Files

Toolbar:

Menu: **Command - Collect Files...**

This command allows you to collect one or more files from multiple workstations.

To Collect files:

1. Select the clients you wish to collect files from.
2. Select **Collect Files** from the **Command** menu or from the right click menu.
3. Specify the file(s) to collect. Use wildcards to obtain all files of a specific type (eg *.doc). You can also enter multiple file specs by separating each one by a semi colon ';' character.
4. Specify the Remote Folder to search for the files.
5. Specify the local folder to save the collected file to.
6. Press the Get file Listing button to show a list of files found.
7. Un-tick any file you do not want to collect. You can tick or untick **Select All** to select or deselect all files at once.
8. If you wish to delete the files from the remote clients when they have been collected, tick the **Delete remote files after collection** checkbox.
9. Press the Collect Files button to start collecting the remote file and saving them on your machine. As files are successfully collected, they are removed from the list. A message will be displayed if any errors occurred in collecting the files and this file will remain in the list.
10. Press Close to finish.

All files are downloaded to the specified local folder; the computer names and user names are appended to the file name to indicate where the file was downloaded from.

e.g. in the above example the selected files are copied into the local user's "My Documents" folder.

Special Inserts:

When specifying the Remote Folder, two special inserts can be used to access the remote user's personal folders.

- To access the user's 'My Documents' folder use %MYDOCUMENTS%
- To access the user's 'Desktop' use %DESKTOP%

eg %MYDOCUMENTS%\Course Work - will find all files in a sub folder called 'Course Work' from the users 'My Documents' folder.

Absolute paths (eg c:\temp, h:\English\Essays or /home/user/) can also be used.

Using AB Tutor
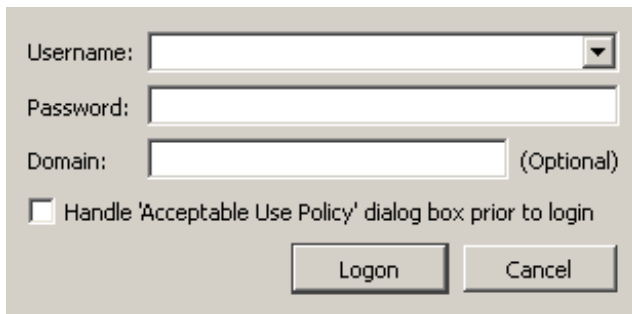
Command menu

Log on

Toolbar:

Menu: **Command - Logon**

This command can automatically log all selected workstations onto the network.

- Enter the required username and password.
- Enter the required Windows Workgroup or Domain name. This is normally left blank so the default domain name for the workstation will be used.
- If the remote workstation displays the 'Acceptable Use Policy' message, then you need to select this option to clear this message prior to logon.
- Press the Logon button or Cancel to abort the command.

Using AB Tutor

Command menu

Logoff
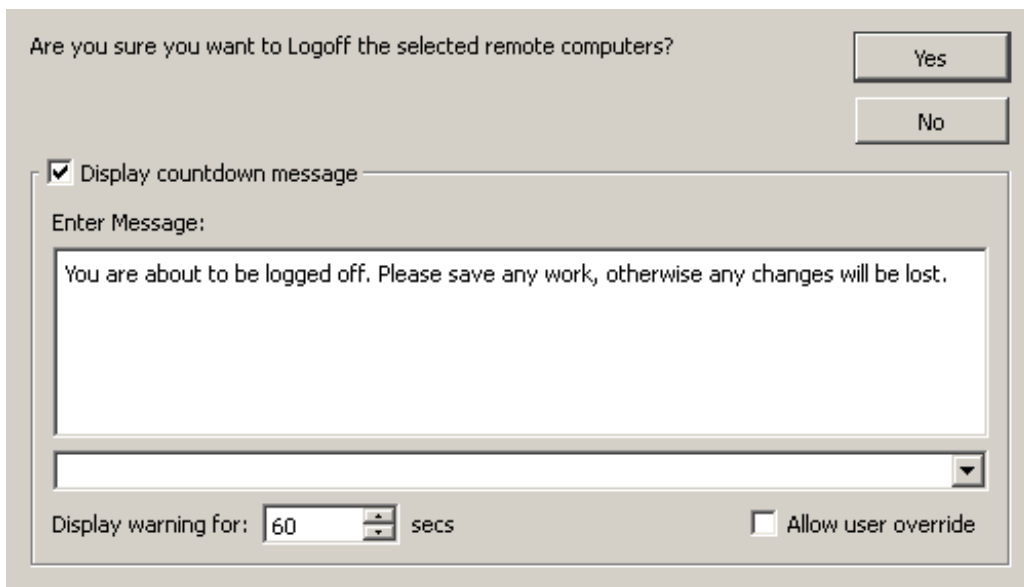
Toolbar:

Menu: **Command - Logoff**

This will logoff all selected workstations. Users will be automatically logged off from the networks and the default logon screen will be displayed ready for the next user.

You will be asked to confirm sending the logoff command to the selected machines.

You can also optionally display a count-down message on the remote client's screen to indicate to any user still using the machine to save tall their work before being logged off.

Select the **Allow user override** option to display a button on the remote count-down window to allow the user to abort the logoff.

⚠ This is a forced logoff command so be careful not to logoff users unexpectedly or before they have a chance to save their work. Also double-check which computers you have selected before executing this command so you do not inadvertently logoff all the computers in your school's network!

Using AB Tutor

Command menu

Reboot

Toolbar:
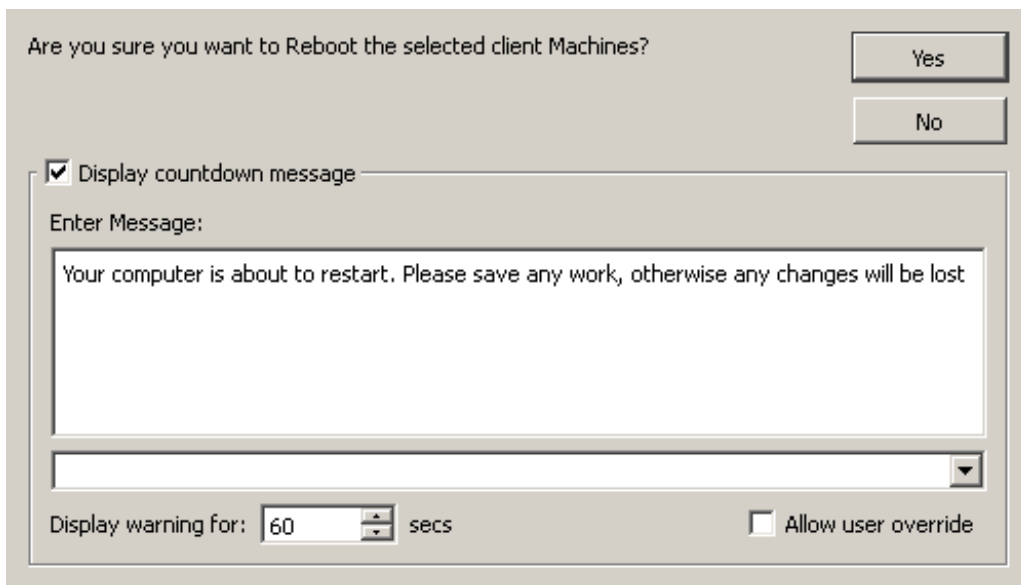
Menu: **Command - Reboot**

This will force all selected workstations to reboot. (i.e. The machine will be shut down and automatically re-started.)

You will be asked to confirm sending the Reboot command to the selected machines.

You can also optionally display a count-down message on the remote client's screen to indicate to any user still using the machine to save all their work before the reboot.

Select the **Allow user override** option to display a button on the remote count-down window to allow the user to abort the reboot command.

⚠ This is a forced shutdown/reboot command so be careful not to execute it without the knowledge of the user, especially before they have a chance to save their work. Also double-check which computers you have selected before executing this command so you do not inadvertently logoff all the computers in your school's network!

Using AB Tutor

Command menu

Shutdown

Toolbar:

Menu: **Command - Shutdown**

This will force all selected workstations to shutdown.

You will be asked to confirm sending the Shutdown command to the selected machines.
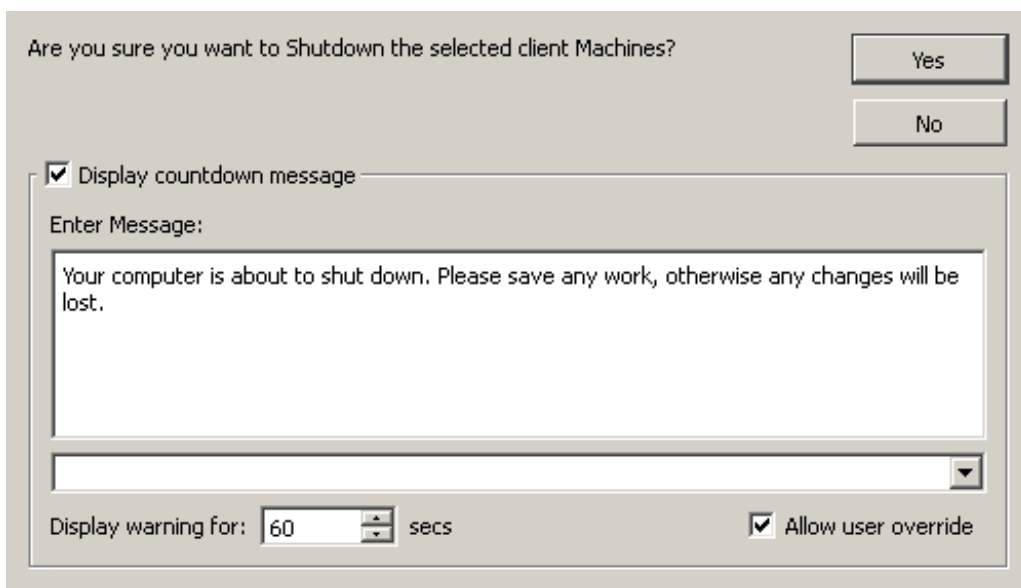
You can also optionally display a count-down message on the remote clients screen to indicate to any user still using the machine to save all their work before the shutdown.

Select the **Allow user override** option to display a button on the remote count-down window to allow the user to abort the shutdown command.

⚠ This is a forced shutdown command so be careful not to execute it without the knowledge of the user, especially before they have had a chance to save their work. Also double-check which computers you have selected before executing this command so you do not inadvertently logoff all the computers in your school's network!

Using AB Tutor

Application

Launch

Toolbar:

Menu: **Application - Launch...**

Programs can be launched on the student workstations from the tutor workstation. For example, the tutor can launch the same application on all student workstations in preparation for the next activity/exercise.

- Enter the application to launch, or select a previously entered application by clicking the down arrow.
- Enter any command line parameters to be passed to the launched application (e.g. a file to open).
- Click the **Run** button.

To remove entries from the drop down list, select them, right click and select **clear**. The whole list can be wiped using **clear all**.

Some applications can be launched without the need to enter a full path. (e.g. notepad.exe or winword.exe). If the application doesn't launch without a path then you must add one.

It is always better where possible to specify the full path to the application especially with Microsoft Office applications. This is to ensure that the program is run under the context to the currently logged-on user. Failing to do this can result in files being saved in unexpected locations.

You can also specify document files without giving information about the application needed to open them. (e.g. U:\Personal\StudyGroup.doc) as the client application will attempt to find the launching application associated with the file's extension. In this case the extension is '.doc' and Windows knows that Microsoft Word is the application that uses this extension.

Also note that you must enter the file extension in order to launch a document in its associated application. Windows will hide extensions by default, but they can be shown by opening

Windows File Explorer and going to **tools, folder options, view** and unticking **Hide extensions for known file types**.

It is also possible to enter a simple web address or URL (e.g. www.mycompany.com) and the default web browser on the remote client machine will launch and show this web page.

To launch Mac apps, use the full path to the app, eg **/Applications/Safari.app**. If you wish to use any command line parameters, the actual executable must be specified, not just the container, eg **/Applications/Safari.app/Contents/MacOS/Safari** - you can then put **open http://www.google.com** in the **Optional program parameters** box to automatically open a website. Other applications will work similarly, however there may be slight differences, for example Firefox doesn't require the **open** parameter.

Items can be added to the applications main pop-down menu by using the Launch Manager. These items then appear under the Launch menu or as a drop-down menu when you press the small down arrow to the right of the Launch button.

or
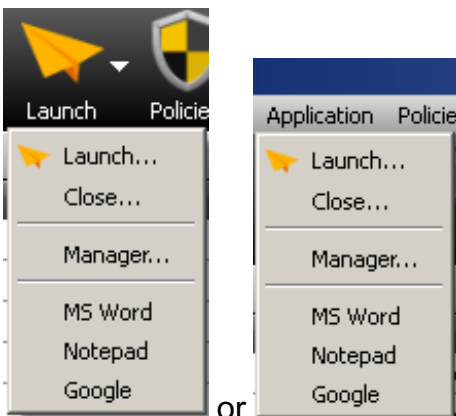
Launch Manager

Menu: **Launch - Manager...**

This command, available only to Administrators, opens the launch manager window to allow you to add applications to run on remote workstations. Items appear under the **Launch** menu or as a drop-down menu when you press the small down arrow to the right of the **Launch** button.
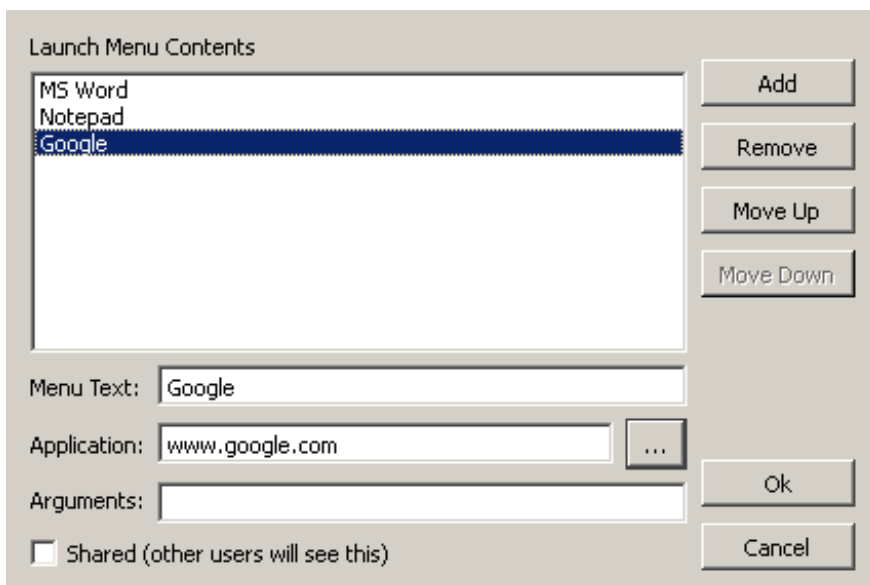
- Press the Add button to create a new entry
- Enter the Menu Text to be shown in the drop down menus

- Enter or select [...] to find the application to be launched

 Check that applications on the Client machines are installed in the same location as on the Control to ensure successful execution.

  - Add any start-up command line parameters to be passed to the launched application. (e.g. the path/filename of a file to open in Word)
  - Repeat the above process to add more applications
  - Press OK to save or Cancel to abort the additions
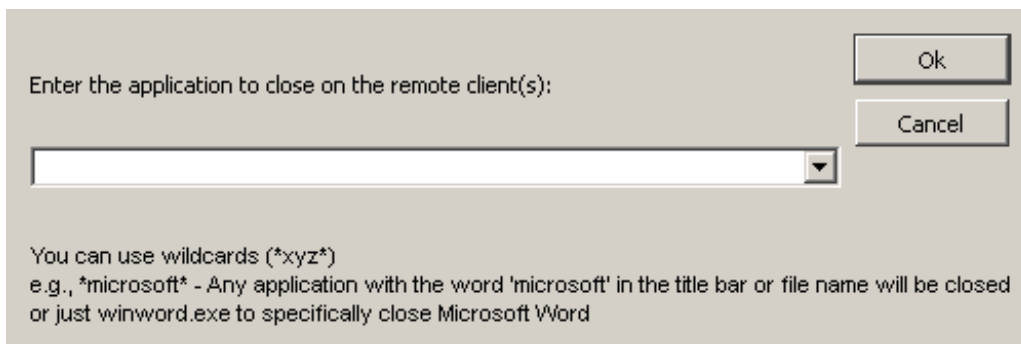
The order of the items in the menu can be changed by using the Move Up and Move Down buttons so the most commonly used applications can be placed at the top of the list.

 A maximum of 25 applications can be added to the launch menu.

Close Applications

Menu: **Application - Close...**

Programs can be closed on the student workstations from the tutor workstation. For example, if a tutor has launched an application on all student workstations, they may wish to close that application on all workstations ready for the next activity / exercise.

To specify the application to close you can either:

1. Specify filename of the application to close - case-insensitive (e.g. winword.exe or IEXPLORE.EXE)
2. Specify the applications title text or part text using wildcards (e.g. *Microsoft*) will close all running applications with the text Microsoft in its window title.

 It is possible to close all running applications by simply entering '*'

 No warning message will be displayed prior to closing the applications on the remote machines.

Application Monitoring

AB Tutor can monitor and show all running applications on the remote workstations. A column in the main views window called 'Applications' shows a small icon representing each running application.

By hovering the mouse over an icon, a popup 'tool-tip' is displayed showing the application's current title and its executable file name.
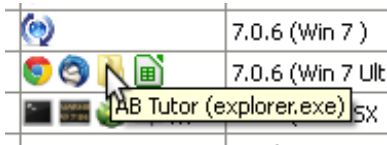
By right-clicking the mouse on an icon, a popup down menu is displayed.

Select **Close 'app name'** - If you want to force the remote running application to close. This command first sends a gentle close command to allow the user to save any changes. If the application has not been closed after 5 seconds, then a hard close will force the application to shutdown and all unsaved work will be lost.
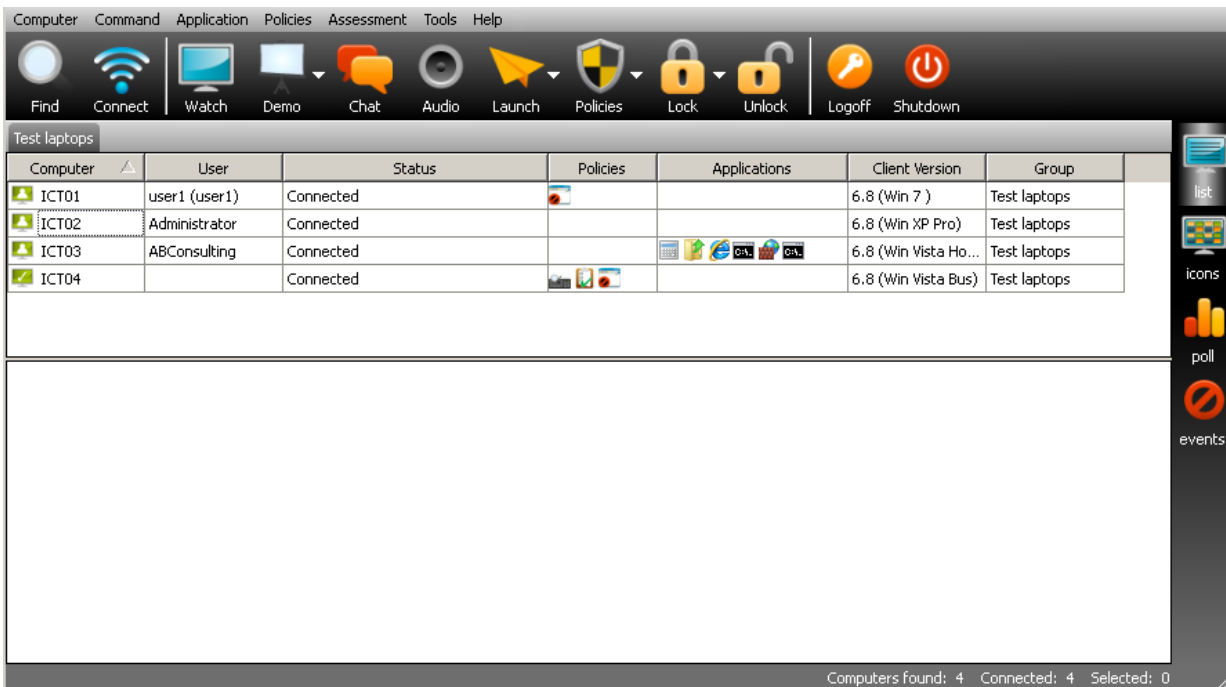
Select **Apply Temporary Block to 'app name'** - If you wish to prevent the user from re-launching the application. This will create and apply a temporary (30 minute) application blocking policy to the remote student.

Using AB Tutor

Policies

Policies can be applied to a remote student's machine to restrict access to specified applications or web pages and to set the level of privacy you would like to give your student and to generally lock their machine down to prevent them doing non-work related tasks.

The screenshot below shows an example of various policies applied to remote computers. All policies applied to a remote machine show up as icons in the **Policies** column.

By hovering the mouse over a policy icon, a popup 'tool-tip' is displayed describing the policy and indicating whether it is temporary or permanent.

There are two steps to setting up and applying policies: first the policies need to be created. This is often done by an administrator, who can protect policies against being removed by users. These pre-created policies can then be applied to selected computers by a tutor, who is also able to clear policies. Both tutors and administrators can create, set and remove policies, unless an administrator has protected them.

Using AB Tutor

Policies

Creating Policies - Policy Manager

Toolbar:

Menu: **Policies - Policy Manager...**

Policies are a powerful way to control what a student can and cannot do on their machine.

You can choose to block or allow specific applications, web sites and system settings. These can be applied on a permanent or temporary basic. If temporary, then the policy will remain in effect for the amount of time pre-specified in the policy set-up. If permanent, the policy will remain in effect on the computer to which it has been applied until it is removed. This means that anyone logging onto a machine with a permanent policy set will be affected by that policy.

The image below shows the Policy Manager with several policies created. This box will be blank when you first start up AB Tutor as there are no pre-set policies. The steps below will take you through the creation of a new policy.
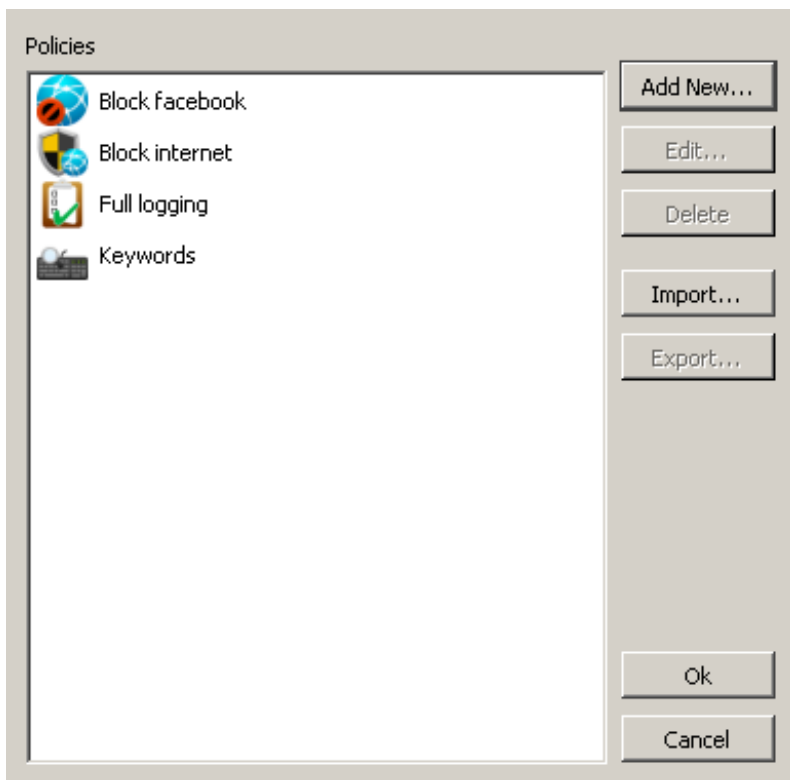
Policies can be exported to a simple XML file for importing to other AB Tutor installations. If you are importing a policy file and the name of a policy already exists, then it will not be imported and the current policy with that name will remain unchanged.

To create a new policy:

- Press Add New... to create a new policy
- Select the type of policy you wish to create
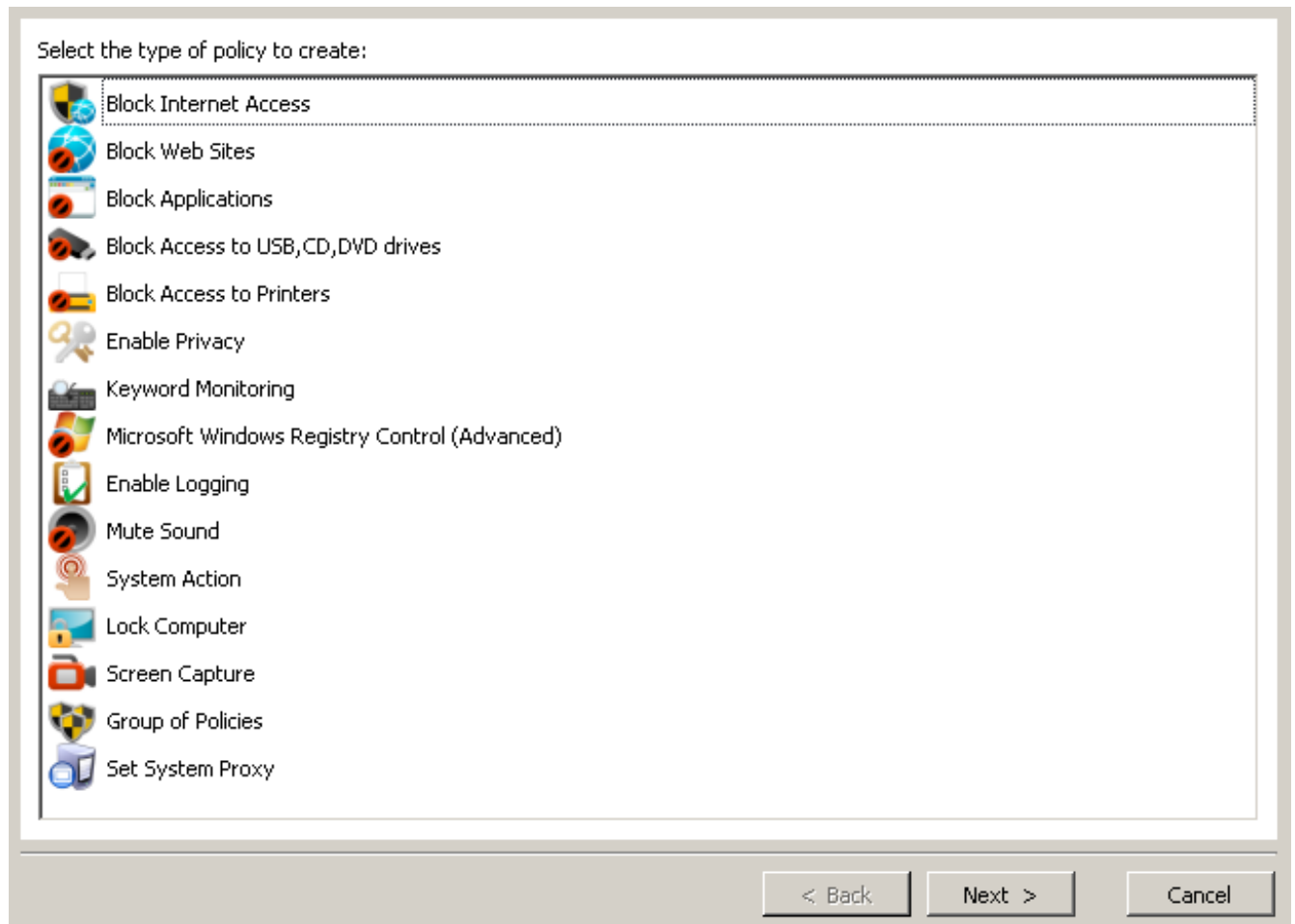
- There are 15 types of policies you can create:
    1. Block Internet Access - This works by blocking all access to specified Internet ports.
    2. Block Web Sites - This allows you to filter specified web sites.
    3. Block Applications - This allows you to control what applications are allowed to run.
    4. Block Access to USB, CD, DVD drives - This allows you to control access to drives.
    5. Block Access to Printers - Using this policy, you can disable access to one or many printers.
    6. Enable Privacy - This policy shows a small Icon in the remote users' system tray to indicate the Client program is running and whether the Tutor is watching. It also allows the remote user to block watching.
    7. Keyword Monitoring - This policy monitors all keystrokes and notifies the tutor when set keywords are typed.
    8. Microsoft Windows Registry Control - Allows specific components to be locked down via the Windows Registry. This option is intended for advanced users. See Appendix 1 - Registry Controls for more details.
    9. Enable Logging - Log the remote users' activity (e.g. login, applications and web pages).
    10. Mute Sound - Allows you to mute the master volume on the remote computers' sound card.
    11. System Action - Allows you to execute a command on the remote machine (e.g. Shutdown, launch or close an application at a set time of the day).
    12. Lock Computer - Allows you to apply the normal screen lock via a policy. (E.g. at a set time of the day)
    13. Video Capture - This policy is used to record the screen of remote users.
    14. Group of Policies - This allows you to group and apply a number of policies at once.

15. Set System Proxy - This allows the client machine's proxy server settings to be set from AB Tutor.

- Highlight the required policy and press Next

Policy Name

This page of options applies to all policy types.

1. Enter a name to identify this policy (e.g. 'Block All Web Access')
2. Select For Specified Time if you want this policy to apply to all users temporarily. It will remain active until a command it issued from a Tutor program to remove it, or one of the following conditions occur:
   - Remove after - Enter the time in minutes for the policy to remain active after which it will get automatically removed.
   - Remove when user logs off - The policy will get removed automatically when the user logs off.

   ⚠ It does not get re-applied when the next user logs on or if the same user logs off and straight back on again.
3. Select Permanent if you want this policy to apply to all users permanently, either all the time or at specified times. It will remain active until a command is issued from a Tutor program to remove it.
4. If you are running AB Tutor as an Administrator, then you will also see the Administrator Security options
   - Protected - If this option is set, then tutors will not be able to apply, edit or remove this policy.
   - If remove re-apply after X mins - You often want to apply a policy that remains active except during a lesson. Previously, the tutor would remove the policy but forget to re-apply it at the end of the lesson. This option will automatically re-apply the policy with or without the tutor's intervention.

- Or re-apply when user logs off - The policy will get automatically re-applied when the user logs off.
5. Choose an icon if you wish to add this policy to the toolbar.
6. Press Next

⚠️ We recommend that you do not set any permanent policies close to the end of your trial of AB Tutor. Once the 30 days' trial has run out, the policies that you have applied will remain in force and cannot easily be removed. Therefore please make sure that you remove all permanent policies well before the trial expires.

Policy Time

If you select a Permanent policy, then you are given the option to control when that policy will be active throughout the day.

By default, the policy is active all day every day. If you wish to de-activate a policy during normal school hours, then:

1. Move the mouse over the box indicating the start time (e.g. Monday at 8 am)
2. Click the left mouse button and drag the mouse to the end time (e.g. Friday 4.30 pm)
3. Release the left mouse button.

You can also click and drag to colour areas back in again, if you want to re-add times to the policy.

Areas marked in white means the policy will be inactive, areas in green means the policy will be set. In the above example, the policy will become active at exactly 5pm Monday to Friday.

The day is broken down into blocks of 30 minutes, 48 in total, so you cannot specify times outside these values.

Using AB Tutor

Policies

Block Internet Access (Windows NT: 2000 - Win7 and MacOS)

This works by blocking access to specific TCP/IP ports. All web browsers access the Internet via port 80 or 443. If these ports are blocked then browsers or applications using these ports will not be able to connect to the Internet.

1. Select the specific ports to block (e.g. Internet access by browsers)
2. If you wish to block additional ports, enter them into the 'Block the following ports' box separated by commas. (e.g. 8080 for proxy servers, 1863 MSN)

There are literally thousands of ports used by various applications and games, below are just a few. For a full and comprehensive list, please check the Internet.

Service	Port
Web server	80
SSL (Secure Sockets Layer) Web server	443
FTP	21
POP3	110
SMTP	25
Remote Desktop (Terminal Services)	3389
IMAP3	220
IMAP4	143
Telnet	23
SQL Server	1433
LDAP	389
MSN Messenger	1863
Yahoo! Messenger	5050
AOL Instant Messenger and ICQ	5190
IRC (Internet Relay Chat)	6665-6669
DNS	53
pcAnywhere	5631

⚠ Because this policy blocks ports on a physical machine, we do **not** recommend using it on Terminal Servers or machines that run multiple sessions. Instead, use the blocking ports method with **Block Web Sites** policies. If you do wish to apply it to all sessions on a terminal server, please apply the policy directly to the server, not to a session.

Using AB Tutor

Policies

Block Web Sites

This policy allows you to restrict access to one or more web sites. You can block/allow a website :
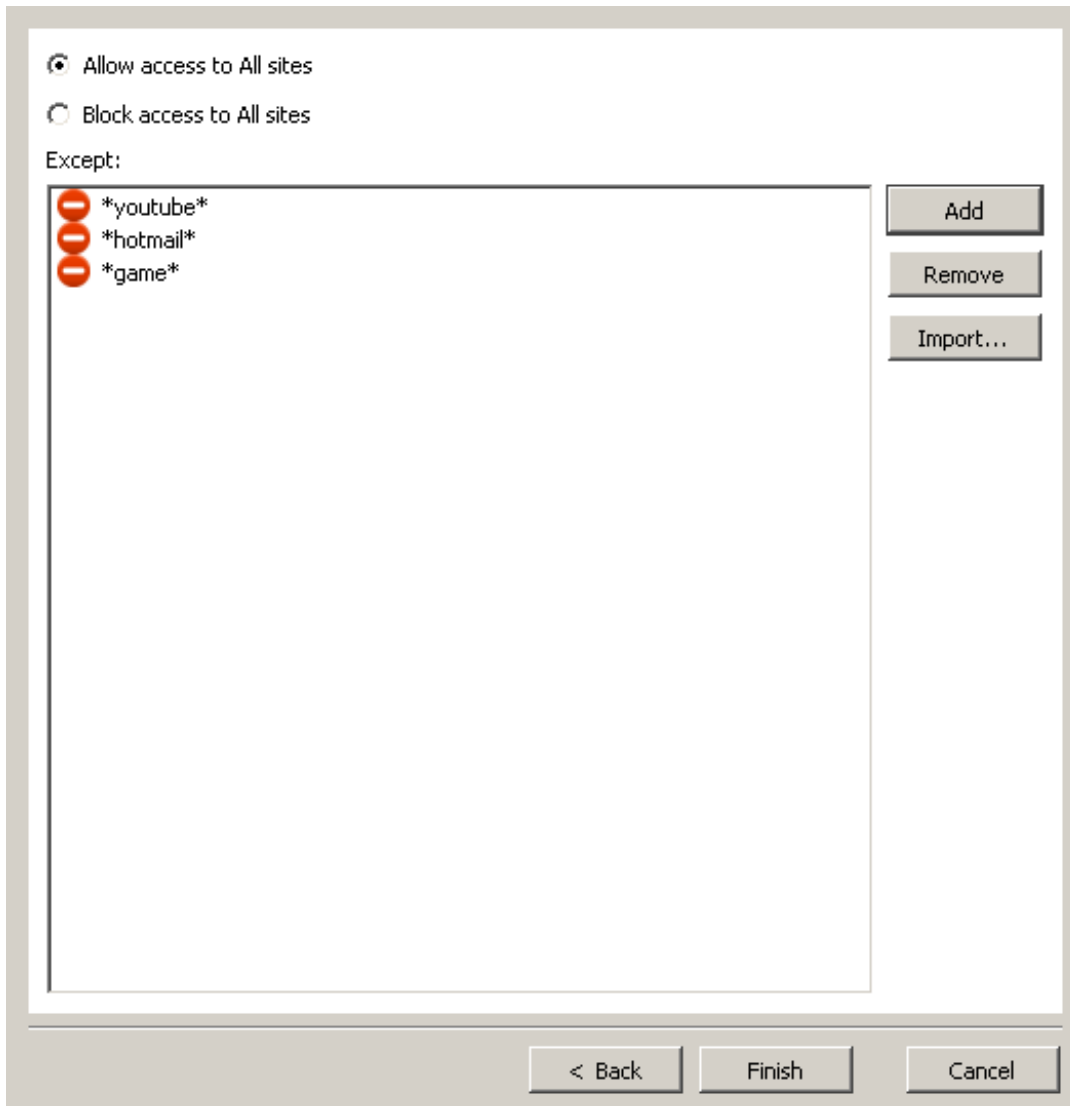
- Select **Allow access to all sites** to block specific sites and allow all others, or **Block access to all sites** to allow specific sites and block all others.
- To create the exceptions press the **Add...** button.
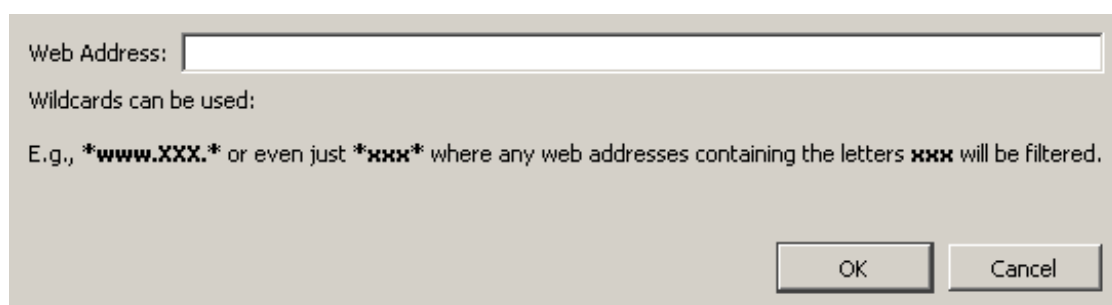
- Enter the web address of the site to be an exception (ie, blocked if all are allowed or

allowed if all are blocked).

- Press **OK** to confirm.
- Repeat to add multiple web addresses.

Wildcards can be used to pick up web addresses that contain certain words (e.g. *sex* will block web addresses that contain the word 'sex', including ones like 'Sussex').

We recommend using wildcards when blocking web sites to catch all possible urls that could point to the site. (e.g. *.youtube.* will block www.youtube.com **and** uk.youtube.com **and** www.youtube.co.uk etc.). You can also block file downloads by specifying the file extensions to block. (e.g. *.exe or *.zip will stop the user from downloading these files types.)

Repeat to add multiple web addresses

Alternatively, instead of manually adding the addresses, press the **Import...** button and select a text file located on your hard drive that contains a list of web sites to add. (Each web address entry must be on a separate line in the text file.)

Web addresses protected with SSL certificates (e.g. **https**://www.xyz.com) cannot be blocked since the url itself gets encrypted before it leaves the web browser. If you need to block a web address using the https protocol, then you must find the IP address the url connects to and specify that as the web address to block.

Please be aware that there are websites on the internet that allow users to bypass any web address filtering. This is called 'Proxy Tunneling'. Students can use these sites to enter banned web addresses and then browse them freely.

Web site blocking also includes support for Regular Expressions (regex). This is an extremely powerful tool for creating rules. Any line item which is enclosed in forward slashes (*/*) will be treated as a regex.

Some example rules (this is not by any means an exhaustive list):

- **.** matches any single character.
- * matches zero or more of the previous character, eg **.*** matches anything. This is useful for padding the ends of a term, like * in standard rules.
- **+** matches one or more of the previous character.
- **[abcd]** will match any single a, b, c or d character.
- **[0-9]** will match any single numerical character.
- **[^a]** specifies any character other than **a**

For example, **/.*setup7[12][29]a+/** would match foosetup712a, setup719aa, barsetup722aaaaa, but not setup722.

Regex support is not provided by ABT technical support, however there are guides available on the internet.

Blocking Entire Ports (An alternative to [Port blocking)](#)

By specifying ':X' as the web address to block, you can prevent all access to the internet via that port number. E.g.

- :80 - blocks all access to the internet via port 80
- :443 - blocks all access to the internet via the SSL secure channel (https)
- :8080 - blocks internet access via some proxy servers

Using AB Tutor

Policies

Application Blocking

This allows you to restrict access to one or more applications on the student's machine. You can block/allow an application by giving its actual file name or by specifying its window title and/or folder.

⚠️ If you apply an application blocking policy to a remote machine and the application you wish to block is already running, then the application will be closed **without** saving any changes.
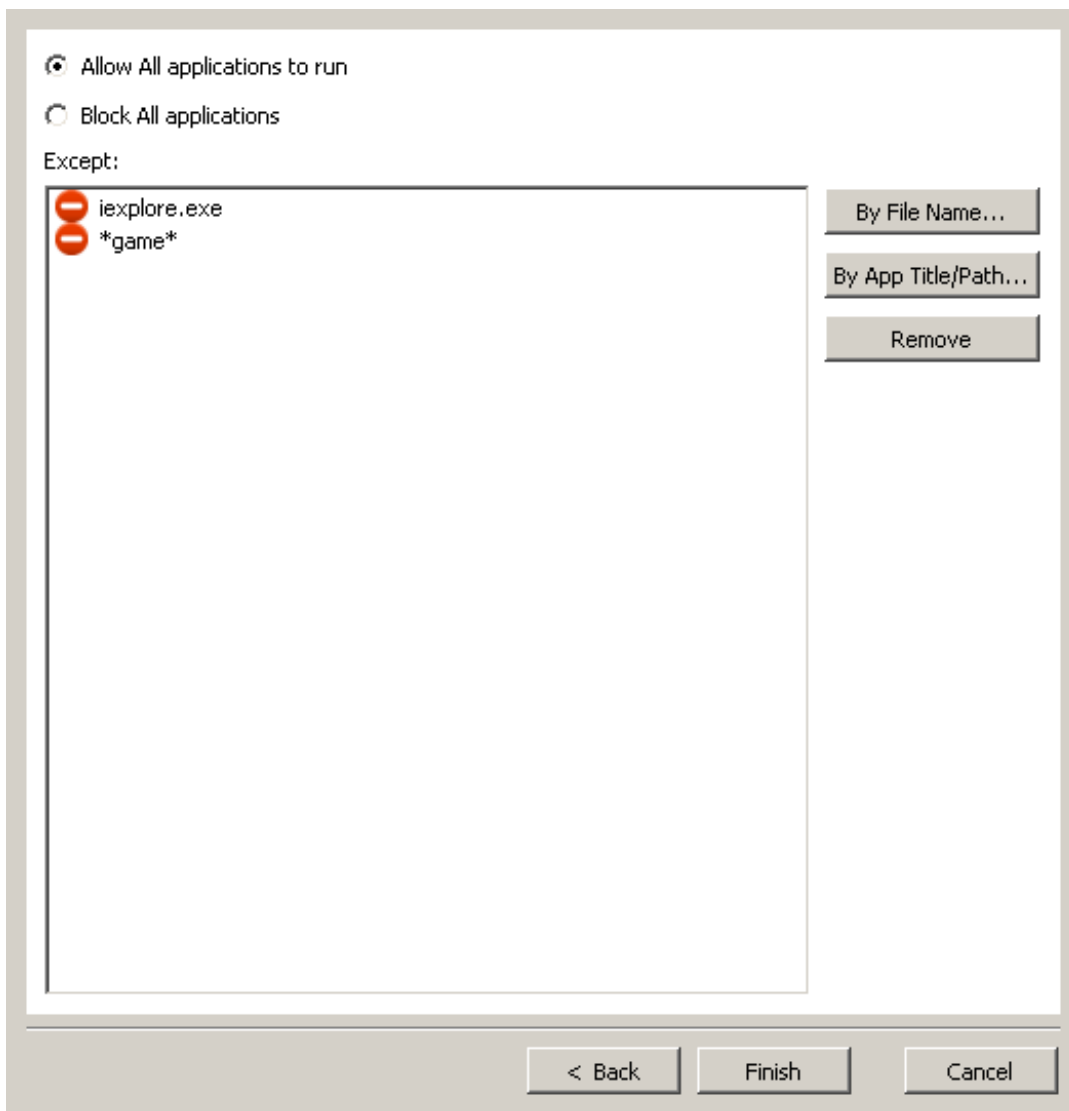
- Select the **Allow All applications to run** or **Block All applications**
- Press the **By file Name...** button
- Browse to and select the program you would like to block

  ℹ️ If the program to be blocked does not exist on your machine but does on the student's machine, then simply type the application's file name in the File name box and press Open

- The application's name is added to the list of **Exceptions**
- Repeat the Add process if you wish to block/allow multiple applications

- Press **By App Title/Path** to block/allow by the application's title and/or folder location.

Use wildcards to search for parts of the title or folder. The text is case insensitive so both *solitaire* and *Solitaire* will work.

e.g.

Microsoft Word	Filters for Microsoft Word
Solitaire	Filters for the Solitaire application
F:*	Filters for any application run from the F Drive
\Microsoft Office	Filters for all applications located in any \Microsoft Office\... folders

Application blocking also includes support for Regular Expressions (regex). This is an extremely powerful tool for creating rules. Any line item which is enclosed in forward slashes (/) will be treated as a regex.

Some example rules (this is not by any means an exhaustive list):

- **.** matches any single character.
- ***** matches zero or more of the previous character, eg **.*** matches anything. This is useful for padding the ends of a term, like * in st andard rules.
- **+** matches one or more of the previous character.
- **[abcd]** will match any single a, b, c or d character.
- **[0-9]** will match any single numerical character.
- **[^a]** specifies any character other than **a**

For example, **/.*setup7[12][29]a+/** would match foosetup712a, setup719aa, barsetup722aaaaa, but not setup722.

Regex support is not provided by ABT technical support, however there are guides available on the internet.

Take great care when blocking applications (especially if you are using wildcards) as you may inadvertently block an essential application.
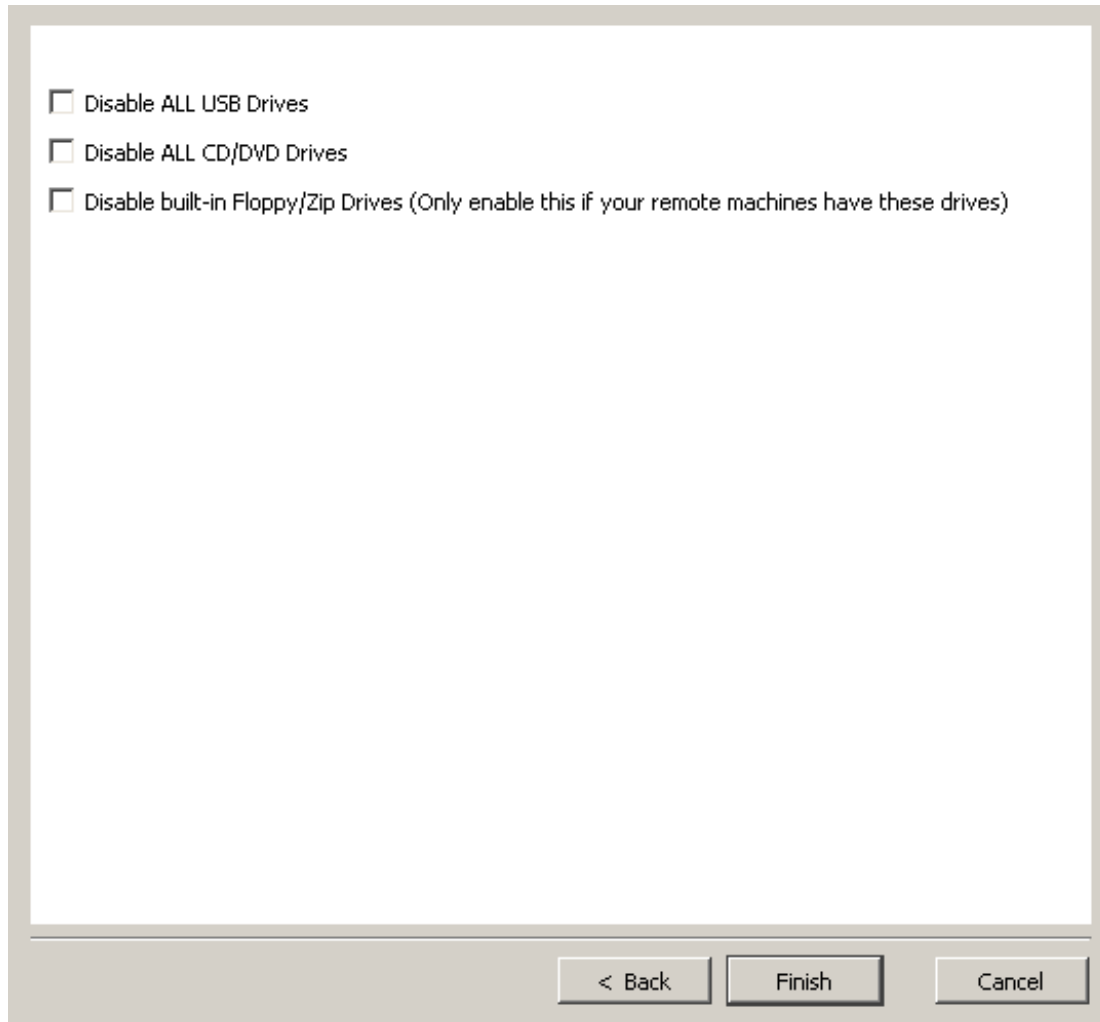
e.g. if you specify *word* then applications like **word**art.exe or any application with **word** in its path name (c:\program files\s**word**fish\main.exe) will be blocked.

Using AB Tutor

Policies

Block Access to USB, CD, DVD, Floppy Drives

This policy allows you to completely disable access to USB, CD/DVD and Floppy/Zip drives.

Using AB Tutor

Policies

Block Access to Printers

This policy allows you to control printing from remote machines. You have the option to Allow all printers... except ones you specify, or to block all printers except those that you list.

To add printers to the exclusion list, click on the '**Add...**' button. This will bring up the following dialog box, which lists all printers available on the network:
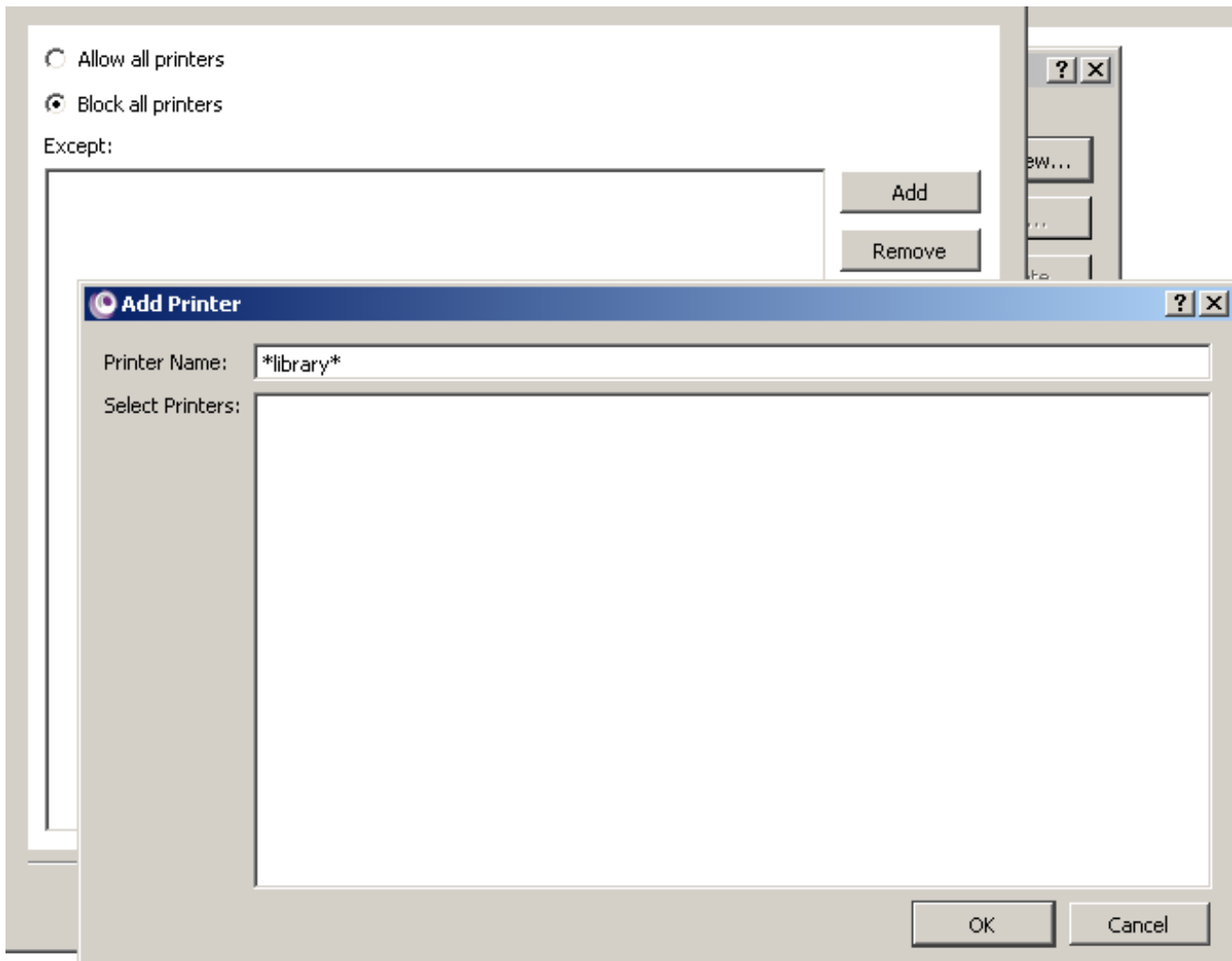
You can then select the printer(s) you wish to allow/block, and click on 'OK'. Alternatively, you can block access to all printers, except... and use wildcards to specify the printers you wish to block.

Using AB Tutor

Policies

Enable Privacy

This policy allows you to indicate to the remote user that the AB Client program is running and that the Tutor is connected and watching. If this policy is set on the remote machine, then a small icon is displayed in the user's System Tray (⊞ bottom right or top right).
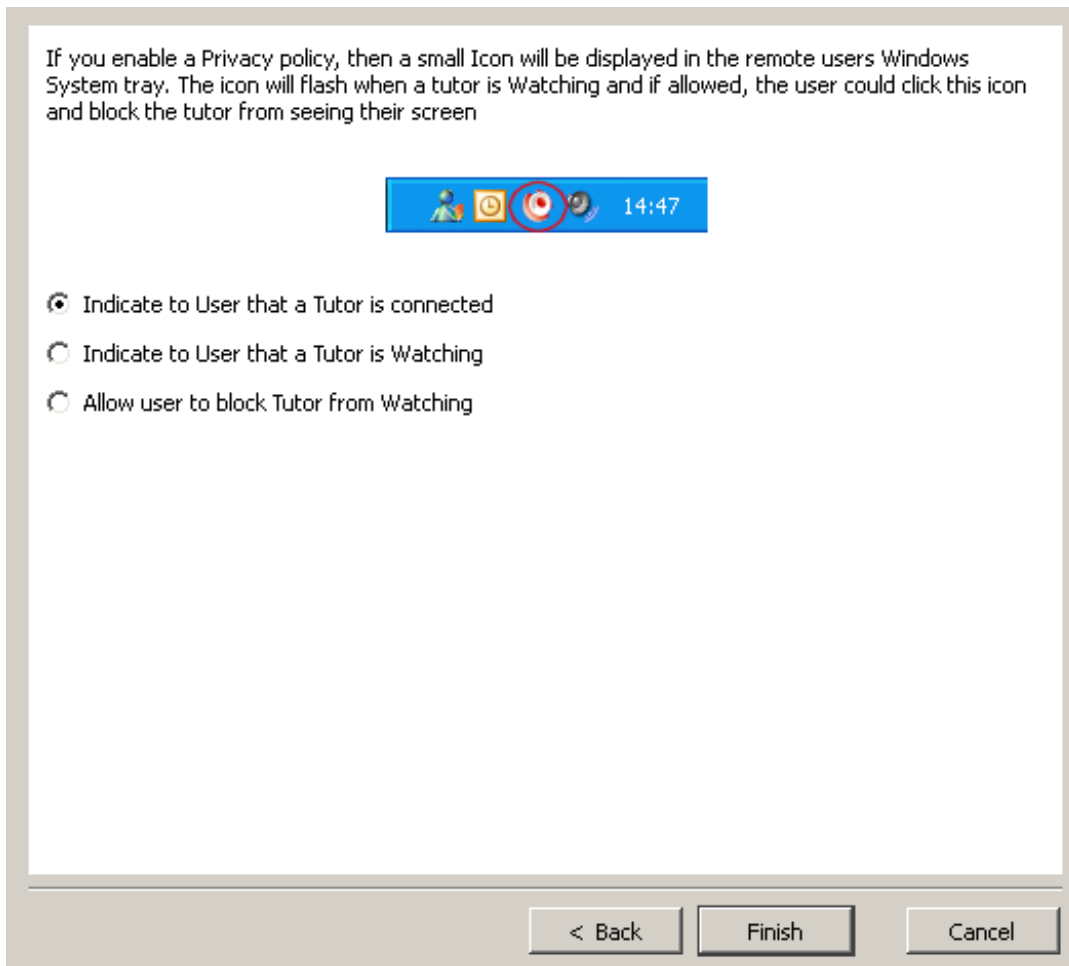
There are three privacy options you can set:

- **Indicate to the User that a Tutor is connected** - this shows the icon when a tutor connects.
- **Indicate to the user that the Tutor is Watching** - the icon will flash indicating that a tutor is watching them.
- **Allow user to block tutor from watching** - this option allows the remote user to prevent the tutor from seeing their screen. To enable/disable tutor watching they need to click the mouse on the icon in the system tray and select the '**Block Tutor Watch**' menu.
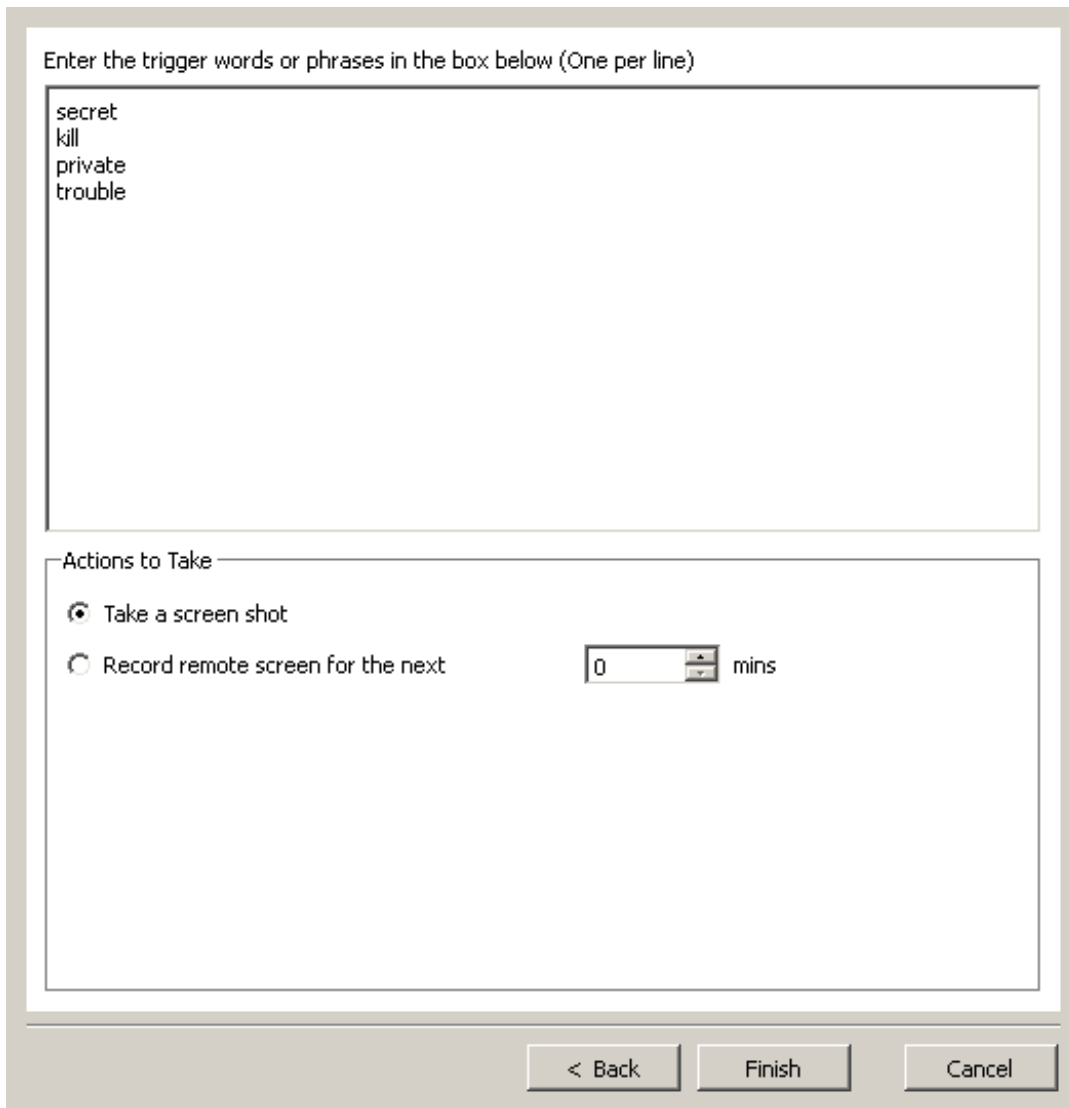
 If this third option is selected and the policy applied to a remote computer, then the block watch is set on by default and must be disabled by the remote user before any Tutor programs can see the remote screen or applications running.

Using AB Tutor

Policies

Keyword Monitoring

With keyword monitoring, you can specify a set of words which will trigger a tutor notification and, if specified, take a screen shot of the occasion when the keyword was used and even record the screen activity on the remote computer.

Enter the trigger words or phrases in the box below (One per line)

```
secret
kill
private
trouble
```

Actions to Take

◉ Take a screen shot

○ Record remote screen for the next   0 ▲▼ mins

< Back   Finish   Cancel

Just enter the trigger words in the dialog box, decide on the action to take when the trigger word is entered by the user, and click on Finish to create your policy.
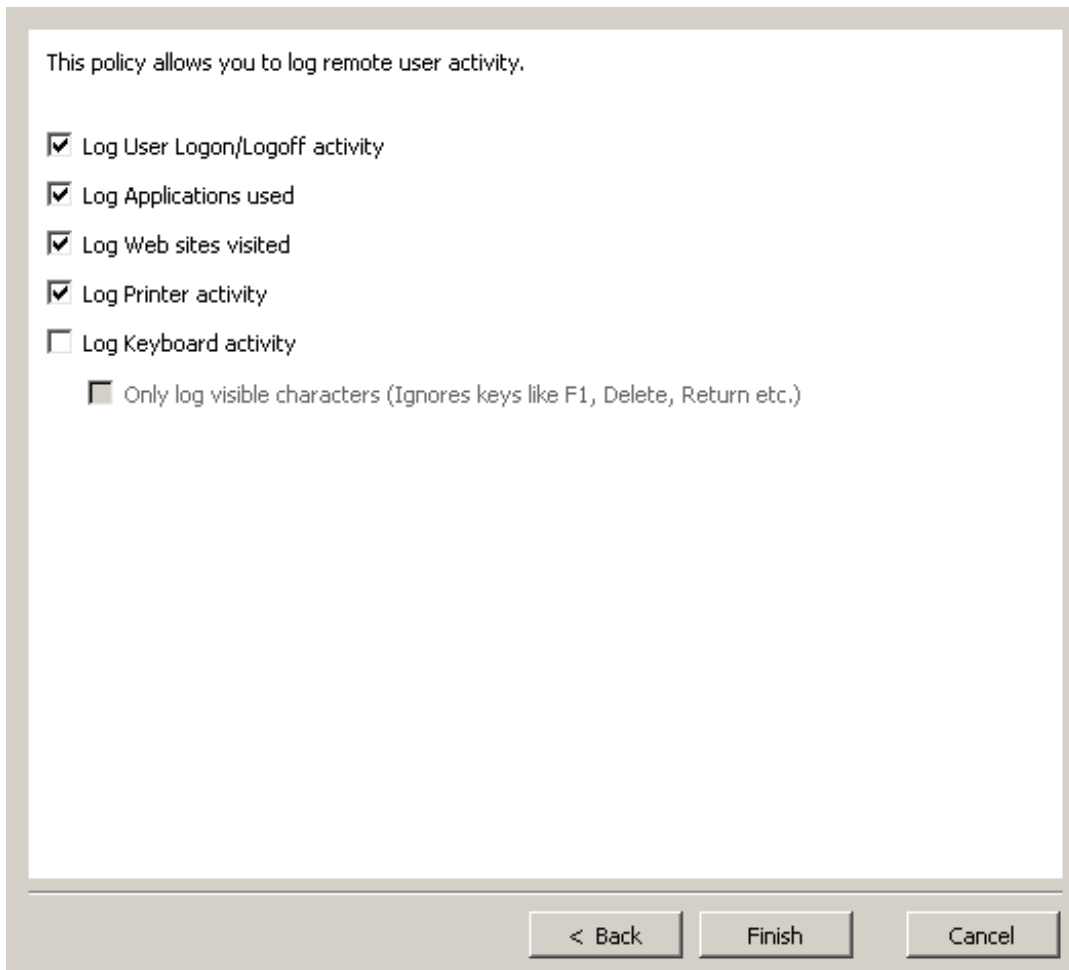
You can also use keyword monitoring to inform you when a student accesses a particular website. So, for example, you could add **https://** as a keyword so that you are notified when a student attempts to log onto a secure site. Alternatively you might want to be notified if a student tries to access www.facebook.com by adding **facebook** as the trigger word.

Using AB Tutor

Policies

Enable Logging

This policy allows you to enable logging of specific activities.

- **Log user Login/Logoff activity** - This will log the date and time a user logs on and also logs off the machine. It will also log the machine's start-up and shutdown times.
- **Log Applications used** - This will log all applications run on the remote machines. It logs the date, time, filename and the application's title.
- **Log Web sites visited** - This logs each unique URL visited using any web browser.
- **Log Printer Activity** - This logs any files printed, their file names and the computers from which the printing was sent.
- **Log Keyboard Activity** - This logs all keystrokes typed on a remote machine.

  Select **Only log visible characters** if you do not want to log non-visible keys pressed by the user (e.g. <BACKSPACE><F1><DELETE><UP><RIGHT> etc)

(See Viewing Log Files)

Using AB Tutor

Policies

Mute Sound

This policy allows you to mute the sound on clients. There are no additional options in the policy creation page for this policy, however the frequency AB Tutor checks that the client is muted can be changed through **tools - settings - advanced**.

Using AB Tutor

Policies

System Action Policy

It can be very useful to set up policies that will execute an action at a set time of the day (e.g. Shutdown at 5.00PM each day)

There are 5 actions you can perform with this policy:

1. Log off
2. Reboot
3. Shutdown
4. Launch application
5. Close Application

Disable for X minutes after executing

Action policies are designed to execute continuously, but most of the time you just want the action to execute once. Therefore, we've added an option to disable the policy once activated for X minutes. Once X minutes has passed, the policy will become active once more. The default time is 31 minutes, 1 minute greater that the minimum policy Active time block. (See Policy Time)

Log off, Shutdown and Reboot
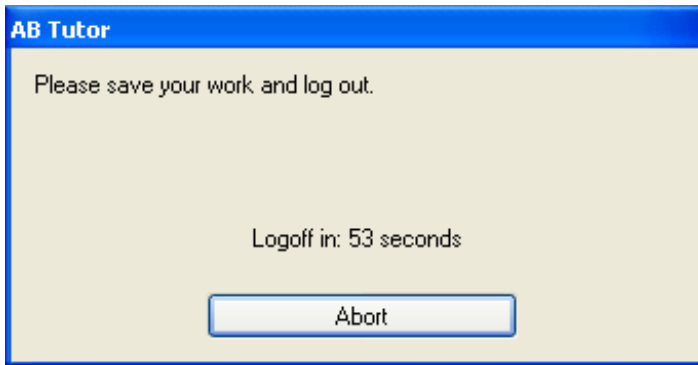
If you want to display a count-down timer on the remote machine before the log off, shutdown or reboot, select the option and enter the text to be displayed to the user.

You can optionally enable a button to allow the user to abort the command if they wish.

Launch Application

This policy will execute an action on the remote machines.
WARNING: Use this policy with careful consideration of what will happen.

Action: [Launch Application ▼]

Disable for [30 ▲▼] minutes after executing

┌─ Enter the application (including path) or command to execute: ──────┐
│ [   ] │
└──┘

[< Back]   [Finish]   [Cancel]

Enter the application (including path) to execute on the remote machine.
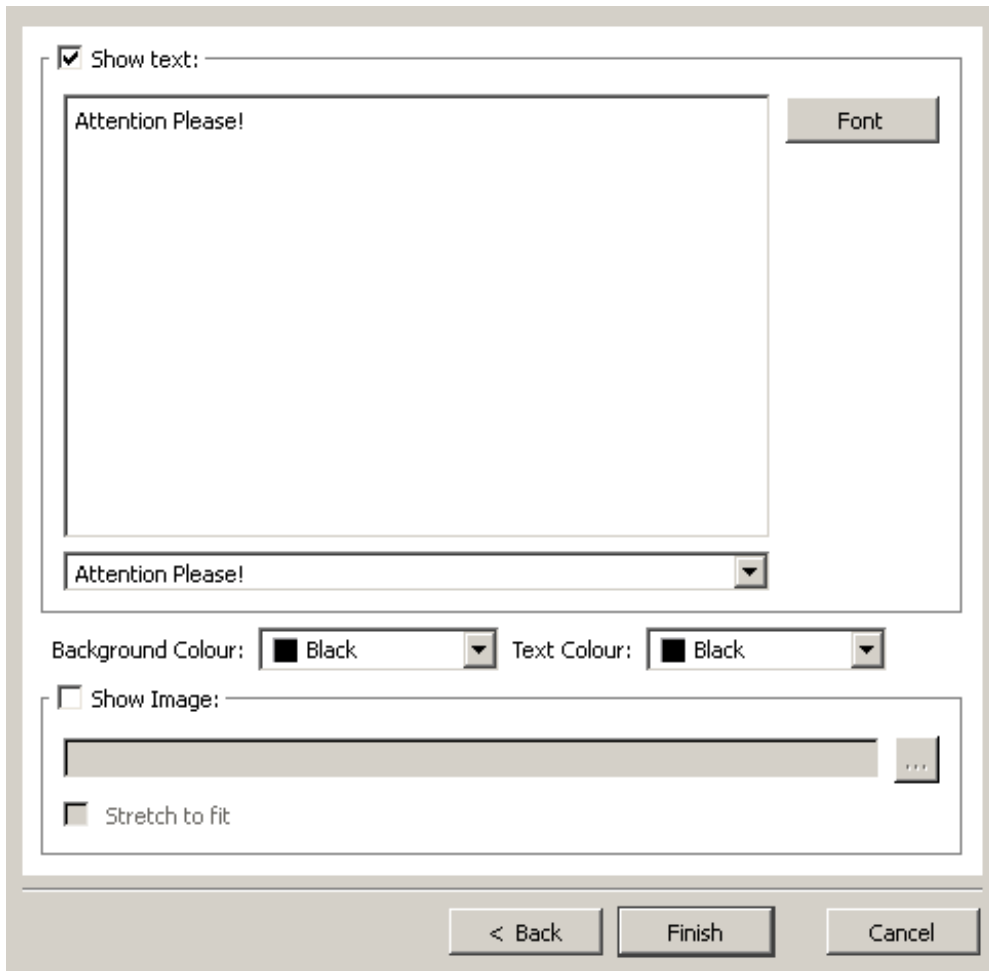
This is useful for scheduling the running of updates or virus scans at a set time of the day or for launching applications ready for use in a lesson.

Close Application

This policy will execute an action on the remote machines.
WARNING: Use this policy with careful consideration of what will happen.

Action: Close Application ▼

Disable for 30 ▲▼ minutes after executing

Enter the application to close (You can use wildcards):

[   ]

< Back   Finish   Cancel

Enter the application to close. The same rules apply as described in Close Applications. (i.e close via the applications filename or title text using wildcards)

Using AB Tutor

Policies

Lock Computer Policy

You might wish to create a policy that locks the remote computers at set times of the day limiting student access.

You can customise the message displayed on the remote screen and/or display an image.

If the student attempts to reboot the machine, then when the system starts up again, this policy will activate and lock the screen, keyboard and mouse.
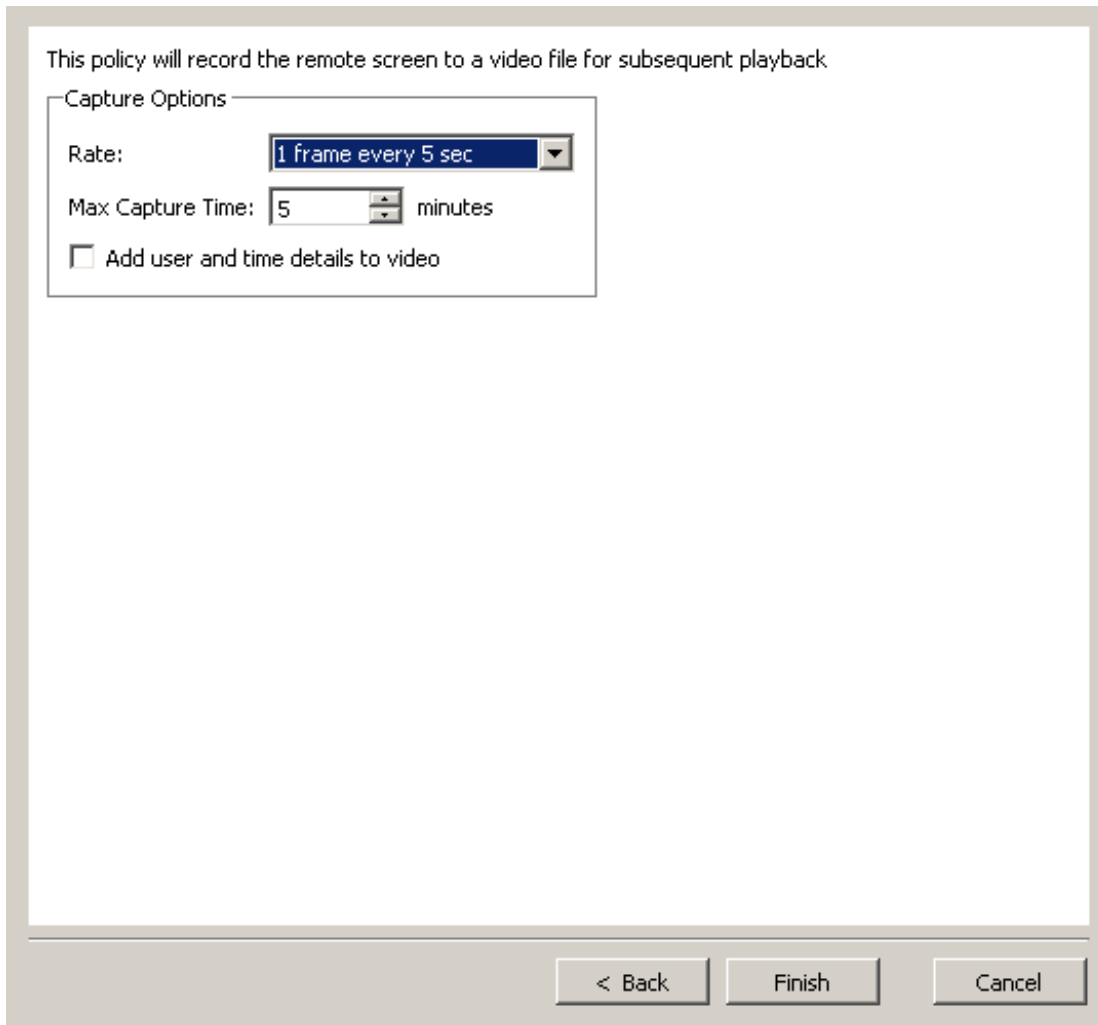
⚠️ Use this option with care! It will activate whether or not the user logging on is a full Administrator to the computer.

Using AB Tutor

Policies

Screen Capture

By setting a screen capture policy on a remote machine, you can record the screen activity of that computer.

Rate: Select the rate of video capture - you can set this to run from one frame per second to as rarely as one frame a minute. The option you choose will depend on what you wish to use the video for. If you wish to just monitor remote usage, then you can set the rate to say 1 frame every 30 seconds. This will be enough to get an overview of what that user has been doing throughout the lesson and will keep the capture file size small.

Max Capture Time: We would always recommend that you set a suitable maximum time to prevent a situation in which you start recording a remote screen, forget about it, and come back a day later to find that the file produced is so large it cannot be stored on your system.

You also have the option to add the user details, date and time to the video. This will be printed in the top right-hand corner of the video.

The video capture files created are stored on remote machines in the '**log**' sub-folder from the installed folder. In order to view these capture files, use the **Log file Viewer** and **Fetch** log entries from selected remote machines. Once you have retrieved the log entries for a remote machine,

they are stored on your local machine under a folder defined in **Tools - Settings - Folders**.

Using AB Tutor

Policies

Group of Policies

By creating a Group of Policies you can apply any number of policies to remote machines in one go.
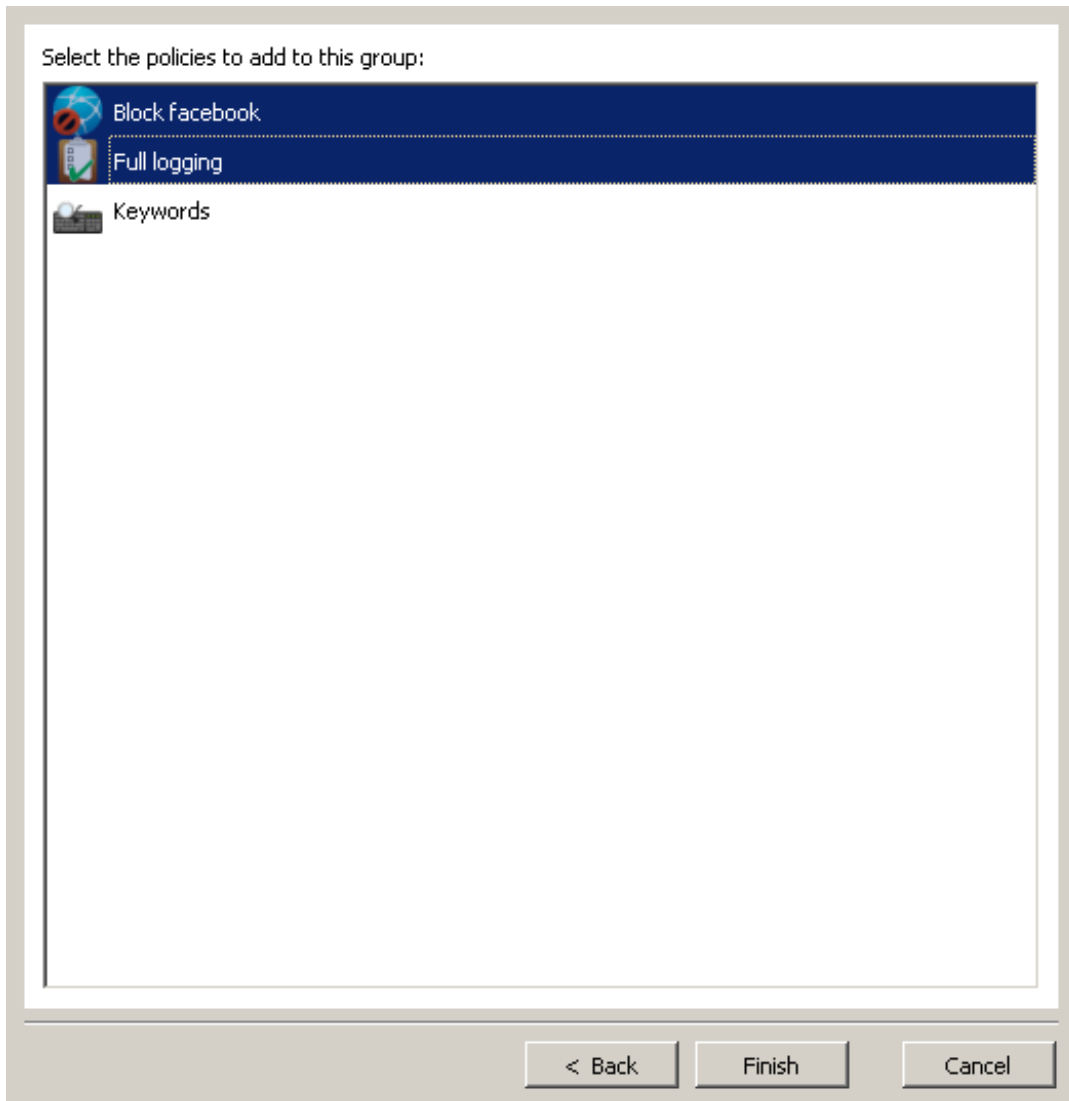
- Select one or more policies to add to this group (Hold the **Ctrl** key down to select multiple items)
- Press **Finish** when done

Applying a group of policies has the same effect as if you applied each individual policy in turn. (i.e. each policy in the group will be shown and must be cleared separately.)

Using AB Tutor

Policies

Set System Proxy

This policy allows the proxy settings on a client to be forced to specific settings, and through using the time options, allows different proxies to be used at different times of day.

The proxy policy options mirror the standard Windows proxy setup dialogue, allowing auto proxy detection, PAC files and manual proxy setup. Once applied to a client, these will override the system proxy settings.

Note that if using both proxy policy and web block policy, the proxy policy should be applied first.

Using AB Tutor

Policies

Applying a Policy

To apply a policy:

- Select the student workstation/s on which you wish to set a policy.
- Select the **Policy** menu followed by '**Set Policy: <xyz>**' where: <xyx> is the policy name entered in the Policy Manager.
  - Alternatively: Click on the down arrow next to the Policies button on the toolbar to pop down a menu to allow you to select the policy to apply.
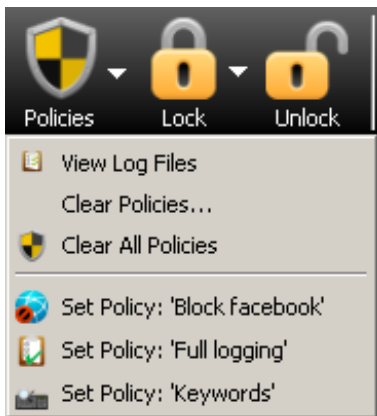
- When a policy is successfully applied, the policy's name will be added to the information for that computer in the main computers list.

Using AB Tutor

Policies

Viewing a Log File

The Log file Viewer allows you to retrieve remote log file data and screen captures and store them on your local hard drive. Once the log file data has been stored locally, you can analyse the data at any time without the need to be connected to the remote machines.

The location to store log files can be changed (See **Tools - Settings - Folders**)

To open the log file viewer:

- Select the **Policies** menu followed by **View Log File...**
- Or select **View Log File** from the drop down menu displayed when you press the down arrow next to the **Policies** button on the toolbar.

To retrieve the latest remote log entries:

- Switch to the Main AB Tutor application
- Select the computers you which to retrieve the latest log files
- Switch back to the Log File Viewer window and press the **Fetch** button

AB Tutor will now connect to and start receiving all the latest log files and screen captures from the selected computers.

Each time you **Fetch** remote log files data, only new entries are retrieved from each remote computer. (e.g. the first time to fetch remote log data, all log files from the past 30 days are downloaded, but subsequent download will only receive data since the last download)

Viewing Log Data

Log entries are grouped by day. The 'Filter' window shows a list of days for which log entries have been created, and highlights in red any days where a violation has occurred (as opposed to normal usage logging). If you select one or more log files from this window, all the log entries will

be displayed in the main list. To select multiple log files, press and hold the Ctrl key and click each file to be added.

⚠ If you have a large number of log files and each log file contains a large number of entries, then processing and displaying all these entries may take a while!

Log entries are colour coded to make it easier to see the different types.

- Black: Applications - launched and closed
- Red: Keyboard activity and events/violations
- Purple: System start-up and user logon/logoff
- Green: Printer activity
- Blue: Web site activity

If you select a log entry and there is additional data associated with it (e.g. event screen shots) then a small preview window is displayed showing a thumbnail view of the image. Double-click this image to expand to a larger window if necessary. If the data is to a web address, you can click this url in the preview window to launch that web site in your default web browser.

By default, the data is sorted by date and time so the most recent log entries are at the top of the list. To sort by any of the other columns, simply click on that column's heading. Click again to toggle between sort ascending or descending.

Filtering and Searching Log Data

If you are searching for specific log entries for a known user or computer, then you can use the Filter section.

- Enter the text you are searching for
- Specify the column to focus the searching to (default: **Any** column)
- Specify the activity type to search (default: **All** activities)
- Press the **Apply** button
- Now select the log file dates to include in the search (don't forget you can select multiple dates)

💡 We suggest to specify the filter before selecting the log files to search otherwise, if you select all log files first, then the system has to populate the list with possibly tens of thousands of log entries before the filter is applied.

Search text tips:

- All searching is case insensitive
- Multiple words separated by a space means a match is found only if **all** words are present in the log entry.
- All searches find the specified text anywhere in the log (e.g. andy will find a match for user Mandy or Sandy etc.)
- To search for words containing spaces, enclose the text in double-quotes (e.g. "internet explorer")
- Use the special word **OR** to find a match for one word or another (e.g. youtube or facebook) This means you can never search for the text **OR** on its own.

Clearing the Filter

The filter will remain active until you either press the '**Clear**' button or you close the Log File Viewer window.

Deleting Local log files

To delete local log files:

- Select the log file date in the list
- Right-click the mouse and select Delete
- You are asked to confirm the delete operation
- Select Yes to continue or No to abort the deleting

⚠ All screen capture files associated with the log file being deleted are also deleted.

Purging Remote log files

If you wish to delete **all** remote log files from remote machines:

- Switch to the main AB Tutor window
- Select the computers you wish to purge all log files
- Switch back to the Log File Viewer window
- Press the **Purge** button.
- You will be asked to confirm the delete command.
- Press **Yes** to confirm the deletion of all remote log files on all selected computers
- Press **No** to cancel

ℹ This deletes **ALL** remote log files on the selected machines but does **not** delete any local copies of these log entries previously downloaded.

Export Log data to file

The currently viewed log file data can be saved to file for loading into other software (e.g. Microsoft Excel). Files are created in HTML format but contain special tags specific to Excel. The HTML file can then be viewed directly using a web browser or loaded into a spreadsheet.

If you wish to save the current log data to file:

- Press the **Export** button.
- Browse to the required save folder and enter a file name
- Press **Save**
- If the file exists, you will be asked to confirm it is ok to overwrite it.

Using AB Tutor

Policies

Clearing Policies

Quick clear on a single machine

If you right-click the mouse on any policy icon you can choose to clear that policy for the selected student. Alternatively, you can choose to or clear all policies applied on that machine.
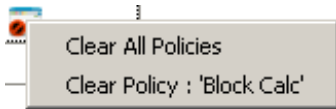
Using the policy menu

To clear a policy or multiple policies:

- Select the workstation(s) from which you wish to clear policies
- Select the Policy menu followed by Clear Policies...
- Alternatively: Press the down arrow next to the button on the toolbar to pop down a menu and select Clear Policies...
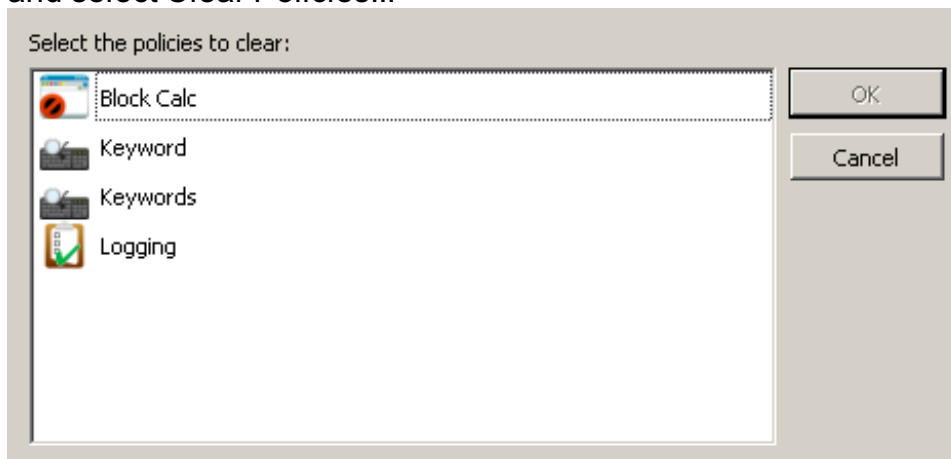
- Select the polices to remove and press OK

Clear All Policies

To clear all policies set on remote machines:

- Select the workstation(s) from which you wish to clear policies
- Select the Policy menu followed by Clear All Policies
- Alternatively: Press the down arrow next to the button on the toolbar to pop-down a menu and select Clear All Policies

You will only be able to clear permanent policies from machines/users to which you are connected. Temporary policies will automatically be cancelled upon closing the Tutor Programme, but you need to connect to machines/users to remove permanent policies.

How long a policy remains in force, where it is stored, and how best to clear it will depend on the kind of policy applied and whether it is permanent or temporary.

Using AB Tutor

Groups (administrators only)

Managing Groups

Menu: **Groups - Manage Groups...**

Since AB Tutor will scan and connect to all computers on the school's network (with the client program installed and running), it will find computers located in other classrooms. In a large network, this could run into hundreds of computers. To only connect to computers in the classroom in which you wish to work, you must create a separate group consisting of the computers (identified by their computer name) and/or users (identified by their user name) in that room.
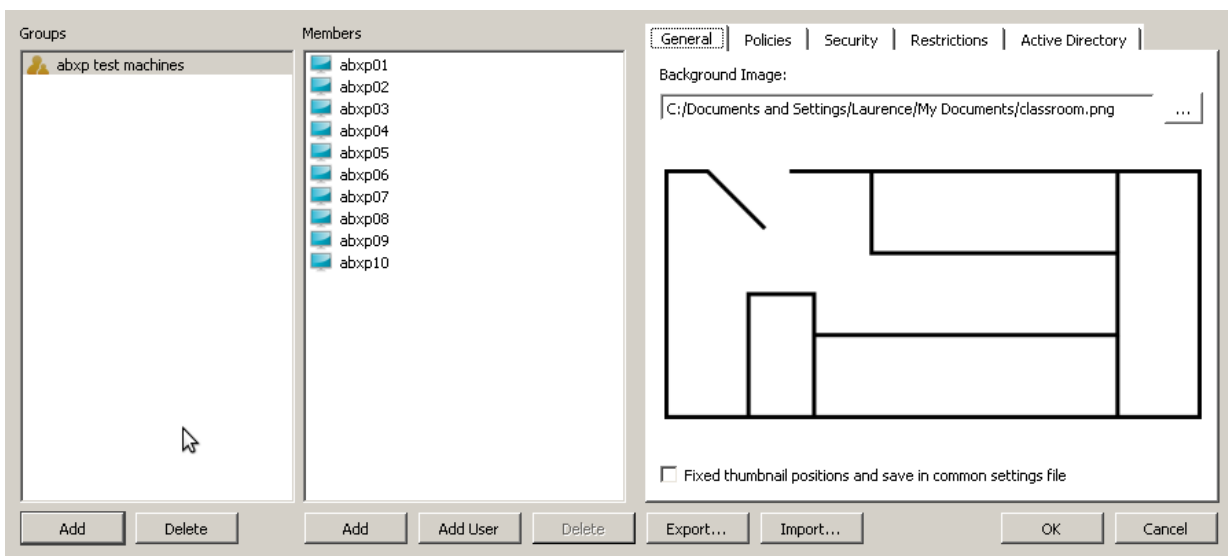
💡 You can resize this dialogue box to maximise the space to view the various controls. The size/position of the window will be saved and restored on subsequent re-opening.

To create a new Group:

- Open the **Group Manager** by selecting **Groups**, **Manage Groups**.
- Click on the **Add** button under the group list to add a new group or right-click in this Groups list and select **Add New**.
- Enter the name of the new group.

or

- Do a **Discovery** scan.
- Select the computers you wish to add to the new group.
- Select **Groups**, **Add to new group**

To change the name of a group, right-click the mouse on group name and select **Edit**.

To add computers to an existing group:

- Open the **Group Manager** and select the group you want to work with.
- Click on the **Add** button under the member list to add a new computer name to the classroom group (or right-click and select **Add Computer** - right clicking and selecting **Add**

multiple computers allows a pre-made list to be pasted in).

- Click on the **Add User** button to add a new user to the group (or right-click and select **Add Username** - right clicking and selecting **Add multiple users** allows bulk adding from existing lists).
- Add additional computers until all have been added.

or

- If you have access to Active Directory, then you can add computer/username directly to the list from the **Active Directory** tab.
- Find the computers or users you wish to add in the AD structure, select them and click **Add to Members**.

or

- Do a **Discovery** scan.
- Select the computers you wish to add to the new group.
- Select **Groups**, **Add to existing group** and select the group name.

To remove entire groups or members from a group:

- Select an unwanted item.
- Either press the **Delete** key or button. A warning message will be displayed to confirm the delete operation.

Press **OK** when done or **Cancel** to abort the additions.

Once Classroom groups have been added, then each time the **Find** button is pressed or when the tutor program first starts up, then following dialogue box will be displayed.
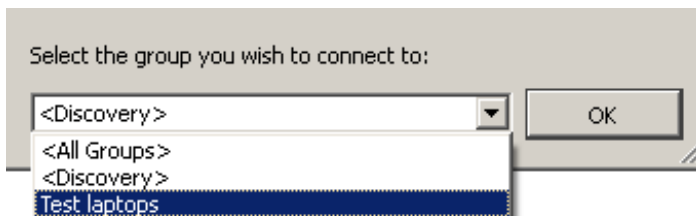
By selecting a classroom from the drop-down list, the system will only connect to computers/users found in that classroom or group.

The **<Discovery>** group is only available to administrator to allow them to continue to connect to all workstations on the network. If a Tutor password is set (See **Tools - Settings - Passwords**), then this **<Discovery>** group will not be available to tutors, thus preventing them from accessing computers outside their classroom. **<All Groups>** is also only available to the administrator account, and will connect to computers in all defined groups.

When you have created a group with users, the user names in the group will be automatically loaded into the tutor Main Window and their user names will be listed when the group is selected. However, until a user logs on, their status will show as 'Not connected.'

Automatic Group Selection

It is possible to use a command line parameter on the AB Tutor shortcut so that when started, the tutor program will automatically select a group. Other groups (including **<All Groups>** and **<Discovery>** for the administrator) will still be accessible via the **find** button.

Syntax: -g <group name> or /g "<group name>"
e.g. "C:\Program Files\ABTutor\ABTutor.exe" -g "Classroom 4"
or ABTutor -g "Classroom 4"
or open -a "ABTutor" --args -g "Classroom 4"

Make sure you enclose the group name with double quotes if it contains a space.

For more information on setting up parameters, please see section 3-4: Startup Switches

General tab
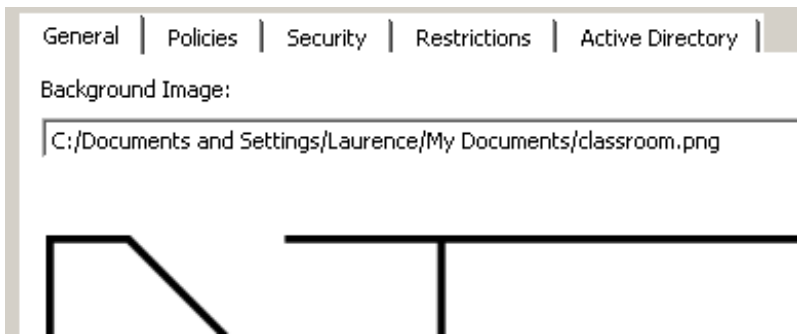
Background Images

By using a graphics package, you can create a simple layout plan of your classroom and display it as a background to the icon view. You can then position each workstation in roughly the correct position on the plan to give you an idea as to where the machine is located.
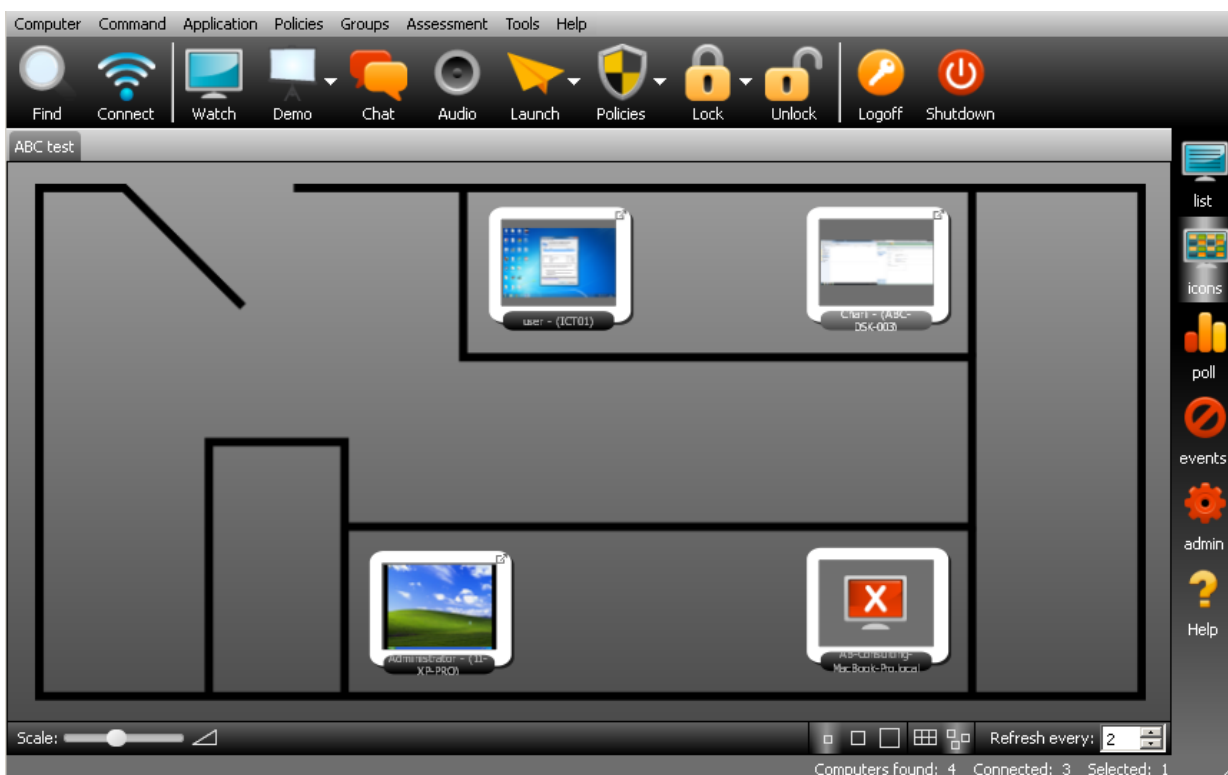
Press the [...] button to browse for your classroom layout image.

The following image formats are supported:

- JPEG
- GIF
- PNG
- BMP

In order to see the background picture, you must re-connect to the classroom group via the **Find** button and you must select the **icons** tab, not the **list** tab.

Use the **Auto Arrange** button to re-position all the icons ready for positioning.

By default the location of computers in a group is a per-user setting, however if you want all users on a computer to share the same positioning, you can tick the box in the Group Manager labelled **Fixed thumbnail positions and save in common settings file**. Note that this will prevent any changes Tutors make from being saved - only Administrators will be able to update the icon locations.

Policies Tab

It is possible to automatically apply one or more Policies to all remote machines to which you connect to as part of a selected group.
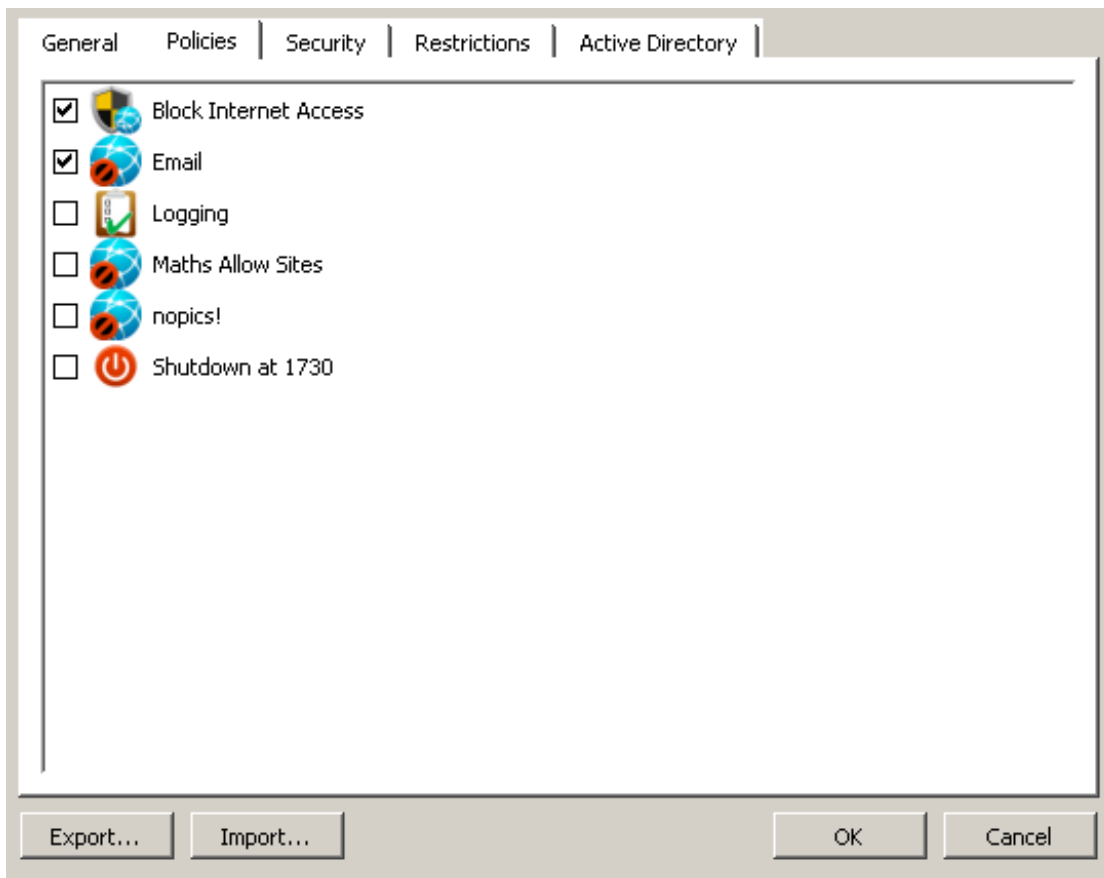
- Select the **Policies** tab
- The list show all policies currently available from the Tutor program (To add new policies, close the Group manager dialog box and select **Policies - Policy Manager** menu)
- Place a tick in the box next to the policy you which to apply

 These policies are applied as though you set them manually from the Policies menu after connecting to the remote machines. So it you select 'Permanent' policies, they will remain even when you disconnect from the group or close AB tutor.

Security tab
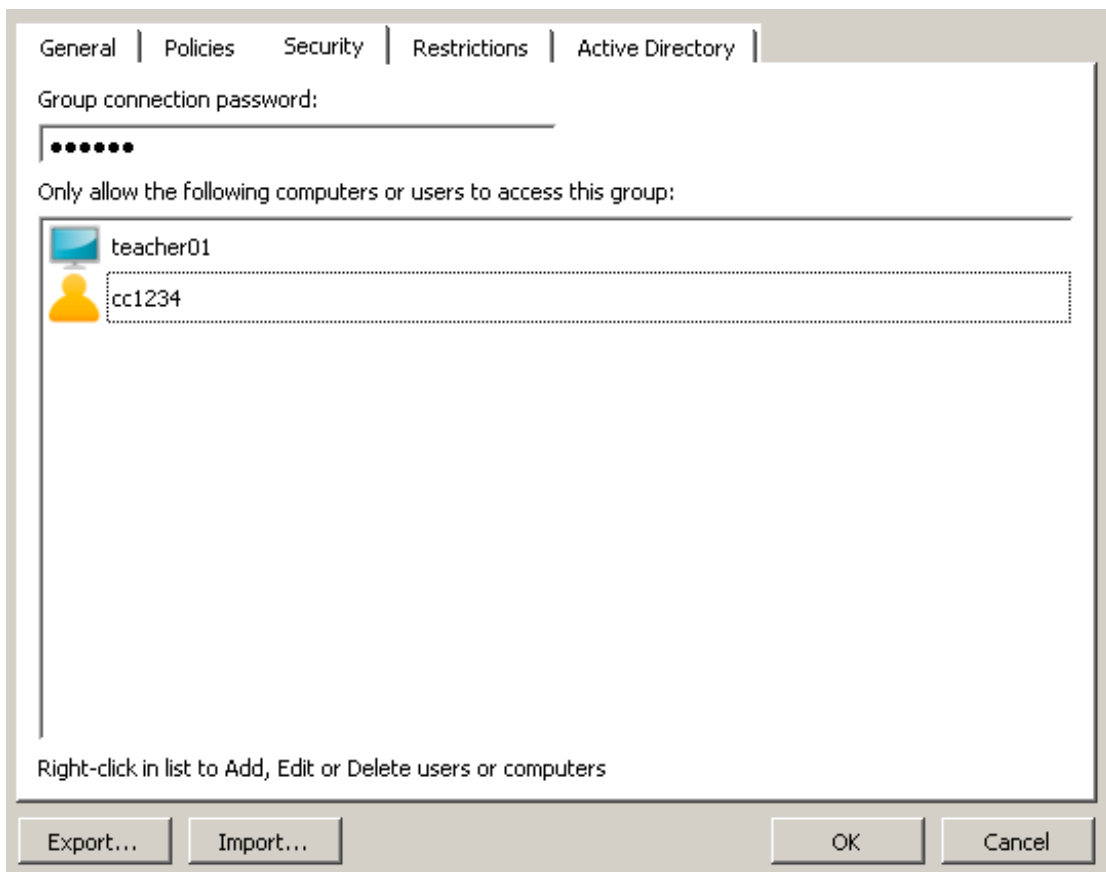
Group Connection Password

By specifying group connection passwords, you can add an additional layer of security to classrooms or machines. Follow the steps below to set classroom passwords:

1. In the main tutor window, find, select and connect to all the computers in your chosen classroom.
2. When you are connected to all the computers in your classroom, select **Tools - Connection Security**.
3. Select the **Change Remote** tab.
4. Enter the old connection password in the **Current Remote Password** box.
5. Enter your classroom password (e.g. classroom1PW) into the **New Connection Password** and **Confirm Password** boxes.
6. Click the **Apply** button. Your new classroom password (classroom1PW) will now be transmitted to all selected machines.
7. Now go into your Group Manager (menu **Groups - Manage Groups**) and select the appropriate classroom. (If you have not yet created a classroom group, you will need to do so now.)
8. Type your new password (classroom1PW) in the **Group Connection Password** box under the Security taband click on **OK**.

Now, whenever a tutor selects that classroom group at start-up, they will be able to connect to all the clients in that classroom, even if a different password is set as the primary connection password.

Group Access

By adding computer names and/or usernames to this list, you can restrict access to this group to only these members. If this list is empty, then all tutors will see this group in the drop down group

selection at start-up or when they press the **Find** button.

- Right-click the mouse in the list window and select either **Add Computer** or **Add Username**
- Enter the name of the computer or the username of the tutor
- Add additional computers/users until all required names have been added
- If you have access to Active Directory, then you can add computers/usernames directly to the list from the **Active Directory** tab
- To remove items from this list, select all unwanted items and either press the Delete key or right-click the mouse and select **Delete**

When a Tutor launches the program and the resulting security only allows access to one group, then that group is automatically selected and the Group Selection popup window is not displayed. This includes cases where there is only one group set up on a machine.

Restrictions tab

An administrator can set command/feature restrictions to each group. This enables you to create groups that prevent the tutors from performing file transfers or viewing screens etc.

- Select the **Restrictions** tab
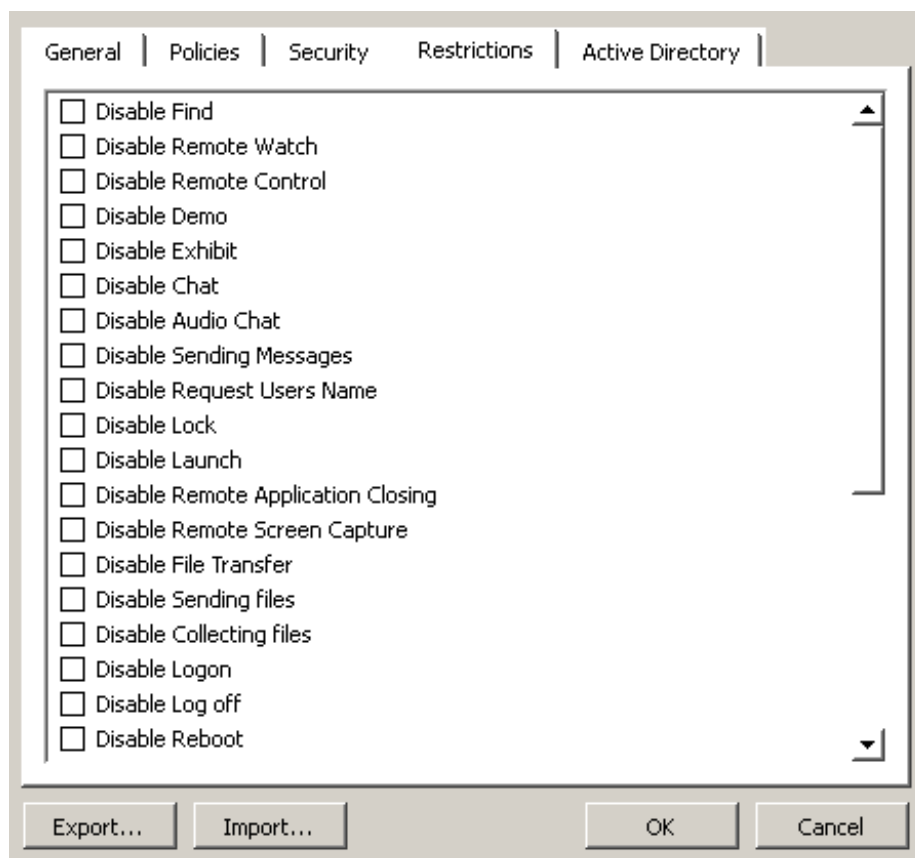
- Select the restrictions to apply to this group

Restriction	Description
Disable Find	Prevents the tutor from being able to find computers outside of the group.
Disable Remote Watch	Prevents the tutor from Watching remote screens
Disable Remote Control	Prevents the tutor from being able to control remote screens
Disable Demo	Prevents the tutor from Demoing their screen to remote machines
Disable Exhibit	Prevents the tutor from Exhibiting a student's screen to other remote machines
Disable Chat	Prevents the tutor from using the Chat feature
Disable Audio Chat	Prevents the tutor from being able to use the Audio chat feature
Disable Sending Messages	Prevents the tutor from being able to send simple messages
Disable Request Student Name	Prevents the tutor from being able to request remote student to enter their actual name
Disable Lock	Prevents the tutor from being able to Lock remote screens
Disable Launch	Prevents the tutor from being able to Launch remote applications
Disable Remote Application Closing	Prevents the tutor from being able to close remote applications
Disable Remote Screen Capture	Prevents the tutor from being able to use the remote screen capture
Disable File Transfer	Prevents the tutor from being able to transfer files back and forth to remote machines
Disable Sending Files	Prevents the tutor from being able to send files to remote machines
Disable Collecting Files	Prevents the tutor from being able to collect remote files
Disable Login	Prevents the tutor from being able to logon remote users
Disable Logoff	Prevents the tutor from being able to logoff remote users
Disable Reboot	Prevents the tutor from being able to reboot remote machines
Disable Shutdown	Prevents the tutor from being able to shutdown remote machines
Disable Sending Ctrl+Alt+Del	Prevents the tutor from being able to issue a Ctrl+Alt+Del command
Disable Sending Custom Key Command	Prevents the tutor from being able to send custom key sequences
Disable Policy Manager	Prevents the tutor from being able to add, edit or delete policies
Disable Sending Policies	Prevents the tutor from being able to apply policies to remote machines
Disable Clearing Policies	Prevents the tutor from being able to remove policies from remote machines
Disable Power On Computers	Prevents the tutor from being able to issue the 'Power On' command
Disable Log File Viewer	Prevents the tutor from being able to view remote log files

Hide Question Poll tab	Prevents the tutor from being able to access the Question Polling functions
Hide Events Tab	Prevents the tutor from being able to access the event viewer tab.
Don't show keyword events/violations	Prevents keyword violations from showing up in the status window.
Disable exam module	Prevents the tutor from using the exam module.

Active Directory

The final tab in the group manager allows an administrator to populate groups and add security entries from Active Directory without having to enter all the computers in it manually.
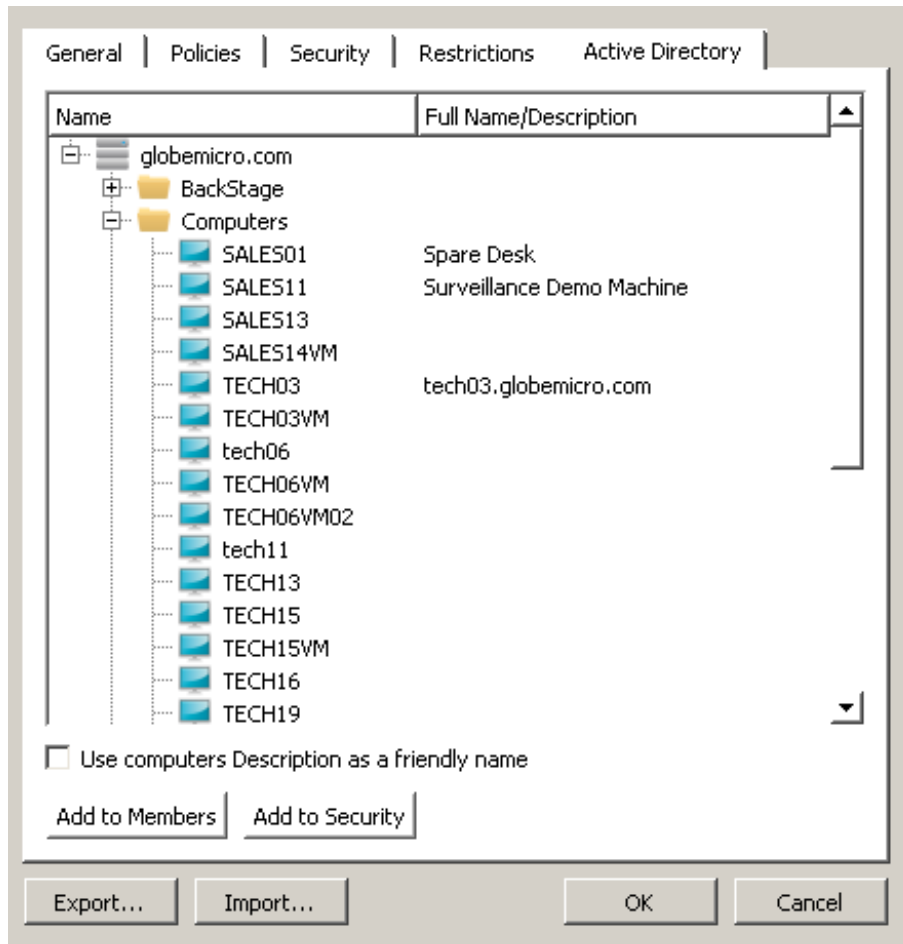
To add computers, find them in the AD tree view, select the ones you wish to add (using shift to select a range, and ctrl to select individual machines) and click **add to members**. If you wish to use the computer descriptions as a **friendly name**, tick the box at the bottom of the window, otherwise the computer names will be used. This interface can also be used to add computers to the **only allow** list on the security tab by clicking **Add to Security**.

For more details on using this tab, see the Managing Groups and Security sections of this page.

Using AB Tutor

Tools (Administrators only)

Settings

Menu: **Tools - Settings**

This opens the configuration dialog to specify General settings, Show/Watch modes, network connections, lock messages, client capture settings and start-up passwords. See [section 3-2: Settings](#)

Connection Security

Menu: **Tools - Connections Security**

This shows the connection passwords settings, allowing an admin to update local and remote passwords. See [section 4-4: Connection Passwords](#)

Check for Updates

Menu: **Tools - Check for Updates**

By selecting this option the system will check for newer version of the program by connecting to the AB Consulting web-site. If any updates are found, then you will be notified and asked which update you would like to apply.

Client Maintenance

Menu: **Tools - Client Maintenance**

This option will check the selected remote workstation for older versions of the ABClient application and show a list of all selected clients.

If older versions are found, they will be automatically ticked, ready to update.
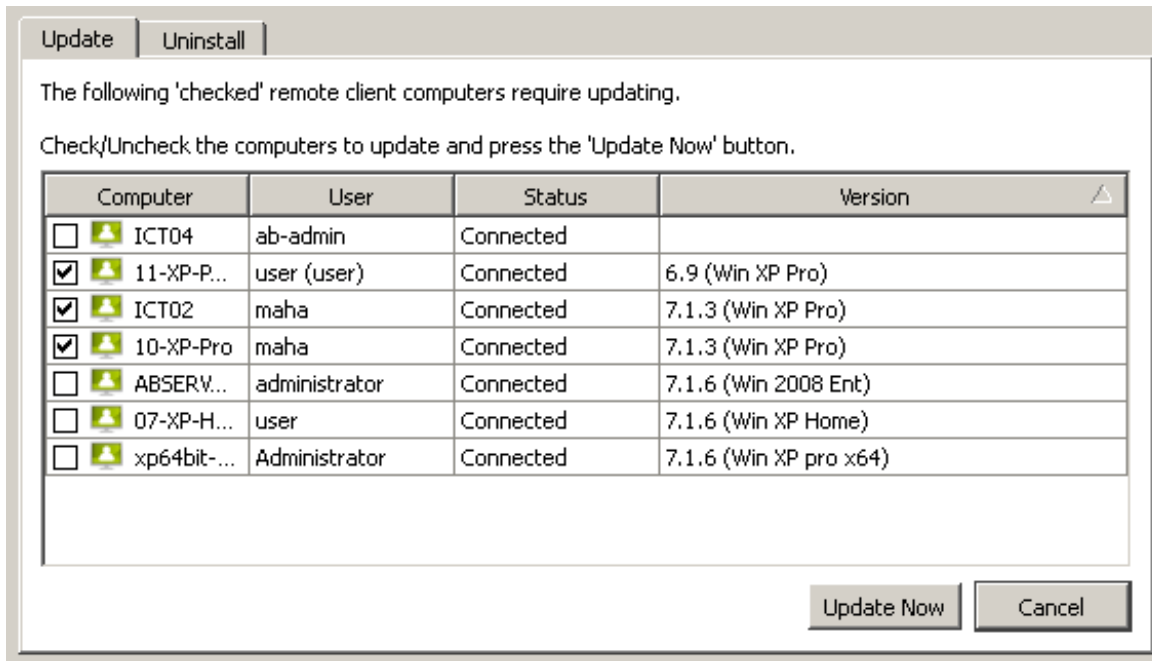
To update the remote clients:

- Select the clients to update from the list
- Press the **Update** Now button

The window will be closed and the clients updated in the background.

Clients can update themselves without a re-boot, however there will be a short disconnected period whilst the remote client is closed, updated and restarted.

If the **Automatically connect to found clients** option has been set, then the tutor program will attempt an automatic re-connection after about 4 seconds. If this fails, then simply press the **Find** button once again to re-connect.

The Client Maintenance option can also be used to uninstall the client:
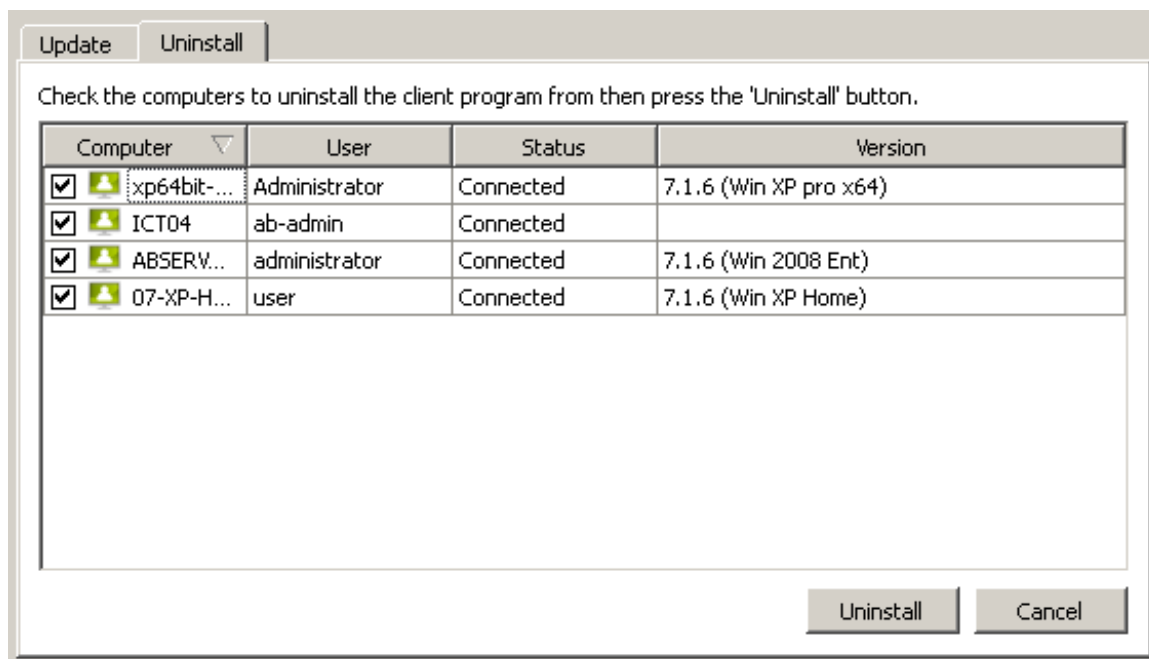
- Select the machines to uninstall from the main list view.
- Select **Tools, Client maintenance, Uninstall**.
- Ensure the machines to be uninstalled are ticked.
- Click **Uninstall**.

Send Key Sequence Manager

Menu: **Tools - Send Key Sequence Manager...**

This command opens the Key sequence manager window to allow an administrator to create their own keyboard sequences to send to remote workstations. Key command menu items are appended to the **Commands** menu and to the **Control** drop-down menu button on the remote view toolbar shown when viewing workstations.

- Press the **Add** button to create a new entry.
- Enter the **Key Sequence** to send in the bottom box.
- Select **Menu Text** in order to enter your own text that will appear on the menu.
- Repeat the above process to add more key commands.
- Press **OK** to save or **Cancel** to abort the additions.

By selecting the **Capture keys as you type** option, all keys you press on the keyboard are inserted into the Key sequence window. This allows you to quickly build long sequences of key strokes, including special keys such as Ctrl and Alt.

The order of the items in the menu can be changed by using the **Move Up** and **Move Down** buttons so the most commonly used commands can be placed at the top of the list.

A maximum of 10 commands can be added to the menu.

All special keys are put between '<' and '>' characters. For example to simulate an Enter key, you should use <Enter> or <Return>. Or to press Shift key, use <Shift>. Here are some more examples:

- To send Ctrl+A use <Ctrl+A>
- To send Alt+F4 use <Alt+F4>
- To send Ctrl+Alt+Shift+A use <Ctrl+Alt+Shift+A>
- You can also use <Ctrl+Alt>, <Ctrl+Shift> and <Alt+Shift>
- To hold Shift key and many keys, use <SHIFT_LOCK>write your keys

here<SHIFT_UNLOCK>

- You can also use <ALT_LOCK>, <ALT_UNLOCK>, <CTRL_LOCK> and <CTRL_UNLOCK>
- To add a delay use <DELAY xxx> where xxx is the amount of time in milliseconds. For example, <DELAY 1500> waits 1.5 seconds.

The key commands are appended to the **Command** menu as shown:
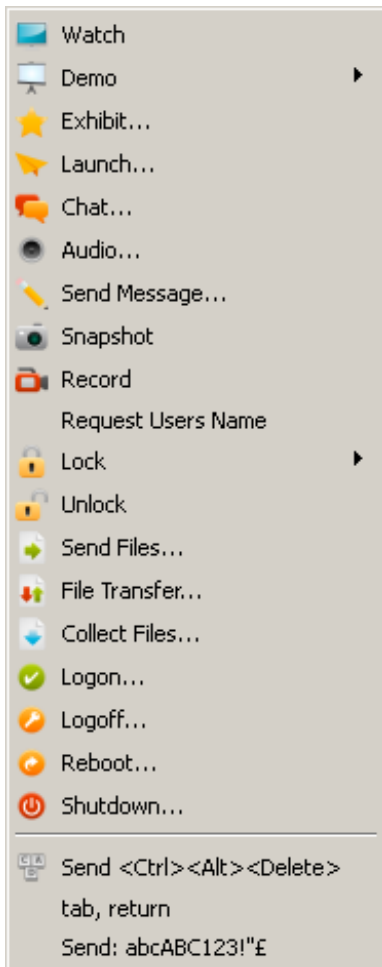
Languages

Menu: **Tools - Languages**

Alternative languages can be selected here. Note that AB Tutor will need to be restarted before the change will take effect.

Using AB Tutor

Assessment

AB Tutor includes a number of ways to assess your students' understanding of the material, of varying levels of depth and complexity.
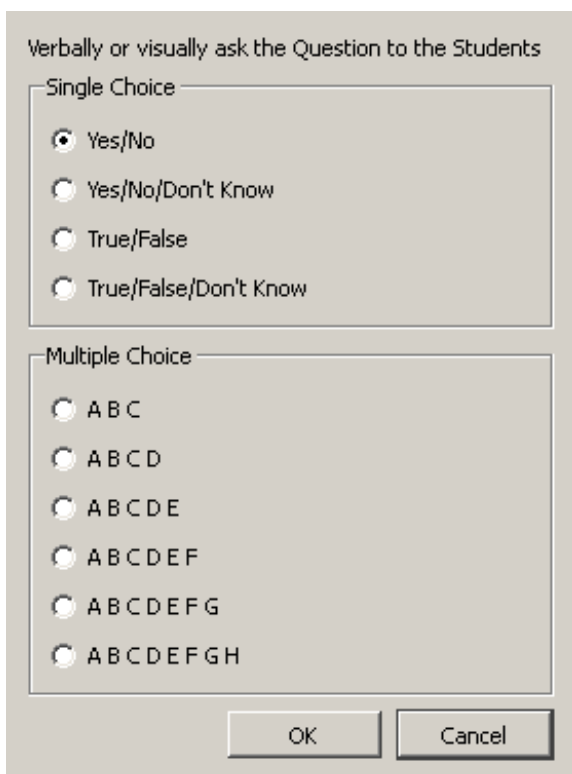
- **Easy Polling** allows you to verbally ask the students a question and have them reply from their computers, using simple "yes/no", "true/false", colour based or multiple choice answer options.
- **Poll** allows you to send written multiple choice questions out to students' computers, and then save the results. You can also create questions ahead of time and save them for future use.
- **Self-Paced Questions** allows a much larger test, consisting of multiple questions to be sent to students' computers for them to work through at their own pace. This function can also prevent the students doing anything else on the computers during the exam to prevent cheating. Again, the results of the test can be exported to a table for future use.

Easy Polling

Menu: **Assessment - Easy Polling**

The Easy Polling system is designed to be used during a lesson to allow a teacher to quickly check their students' understanding. Instead of asking an individual student, the entire class can answer independantly from their computers. The questions can have yes/no, true/false or multiple choice answers. When the students answer, the teacher will see a summary of the answers given, and can see a detailed breakdown of the answers on the list view.

To send an Easy Poll form, select the relevant computers in AB Tutor, then select **Assessment - Easy Polling**. A window will open with the available answer sets:

Select the answer set you want to send, and click OK. The options will appear on the student

computers allowing them to answer your question. As they do, feedback will appear on the teacher console. If you want more detailed feedback, each individual student's response will be displayed by their name on the list view.
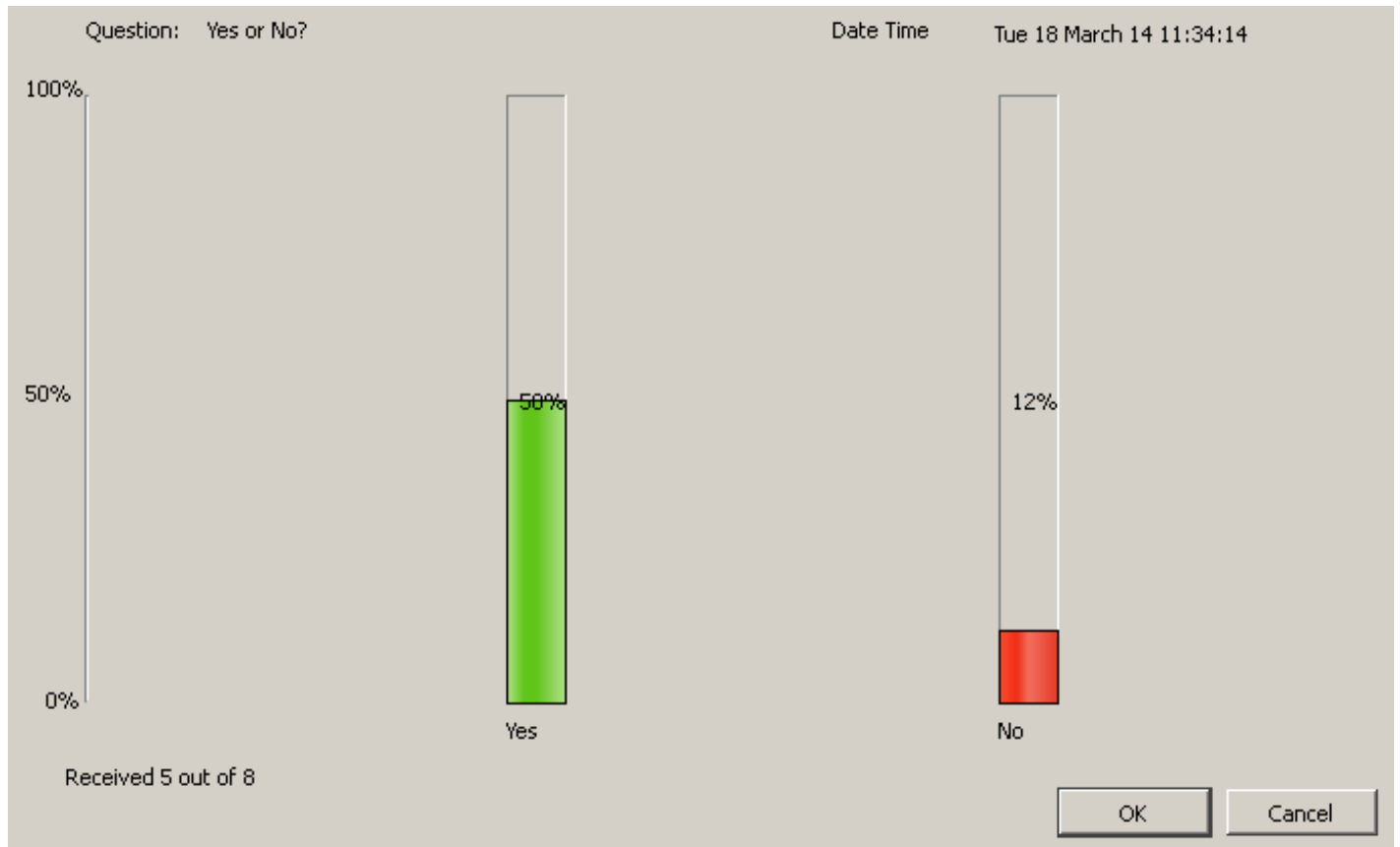
Poll

Menu: **Assessment - Poll** or use the **poll** button on the right hand toolbar.

The Poll option is intended for slightly more detailed questions, and will send the question out to the student machine along with the answer form.

To create a question:

- Enter your question text
- Select from the drop down list the type of question. You can send either a **Single Choice** or **Multiple Choice** question.
- Add one or more answers by right-clicking the mouse in the **Answers** section and select **Add New**
- Double-click on the answer text to edit it (Alternatively, right-click on the answer and select **Edit**)
- Only answers that have a Tick in the box will be sent to the remote machine.
- To delete an answer, select it (hold down the Ctrl key to select multiple answers) then either press the Delete key or right-click and select **Delete**
- When you are ready to send the question, select the remote computers in the Main Window (list on the left) and press the **Send** button.

Press the Send button once only otherwise the Tutor program will send multiple copies of the question. This is done deliberately so that you can send the question multiple times if computers are shared by more than 1 student.

If you want to save this question and its answers for future use, press the **Save** button bottom right. To restore saved questions, select the required question from the drop-down list of previously saved questions.

If you want to delete a previously saved question, select the question from the drop down list and press the **Delete** button. (If this button is disabled, then it means you have not selected a question

yet)

If you want to completely reset the question text and answers, then right-click the mouse in the answers window and select **'Clear All'**

Analysing the Results

As students submit their answers, the results are displayed in the Results columns and in the Status column of the main window. By scanning over the Status column, you can easily see who has not yet answered and also actual answers from those who have.

To save the results, press the **Export** button. You will be prompted to specify a folder and filename for the results file. The results are stored in HTML format and can be later opened using any web browser or imported into a spreadsheet package for further analysis.

Ending or Resetting the Feedback

When you have finished, press the End button to stop any further processing of replies. The Question Polling will also automatically end if you click on one of the other tabs on the right to change the view.

Self-Paced Questions

Menu: **Tools - Self-Paced Questions**

The Self-Paced Questions system allows longer and more in depth testing of students than the single question polls, but is designed along a similar system.

When opening the Self-Paced Questions module, you will get the following window:

The top row of buttons are for options which affect the entire test, saving and loading allow completed tests to be copied between computers, preview will show you the test as the pupils will see it and do a dry run through it. Save result and export are for dealing with the results after the test has been taken, and start, stop and clear deal with running the test once it has been

created.

Settings

This tab configures the basic settings for the test. It can be given a title and description, and allows the teacher to choose what rules apply. The title will be used as the filename when an test is saved.

- **Exam is timed**: Allows a time limit to be placed on the exam, from 1 minute to 10,000 minutes.
- **Randomise questions**: This option gives the questions in a random order, making copying between students harder.
- **Randomise answers**: This option shuffles the order the possible answers to each question are displayed.
- **Students are allowed to pause the exam**: Allows the exam clock to be stopped, but prevents input during this time. Note that the current question is still visible at this point.
- **Allow students to review answers before submitting**: Allows the student to view all their answers on one page for easy checking before submitting.
- **Allow students to verify with tutor after submitting**: Shows a summary of correct answers against the ones submitted by the student.
- **Allow students to see their results after sumitting**: After the student submits the exam, they will see a summary of their results, telling them how many questions they answered and right/wrong totals.
- **Allow students to switch to and run other applications**: If this is unticked, the exam will run full screen and prevent access to anything else on the computer.

Questions
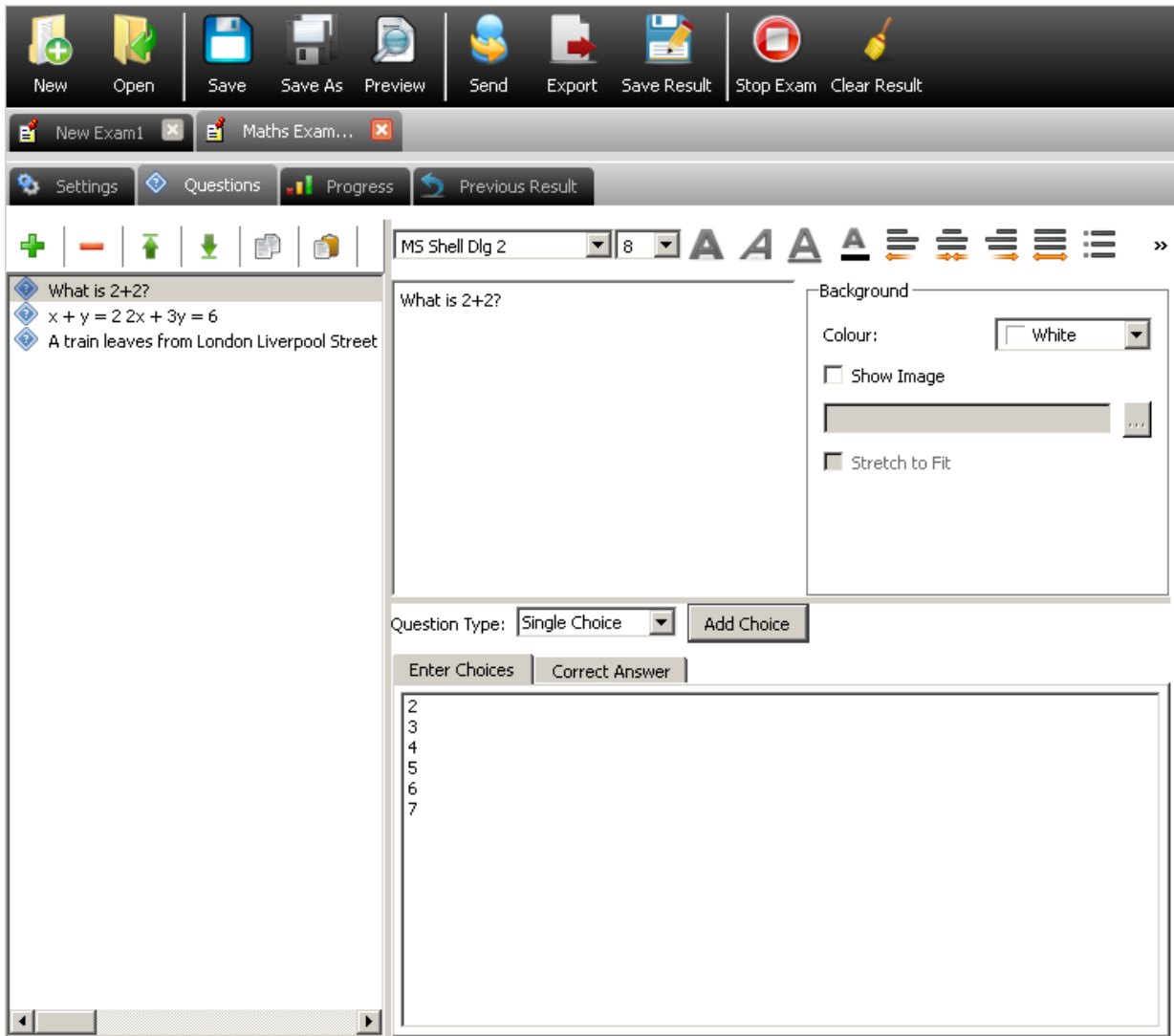
On this tab, the questions for the exam can be entered. The buttons across the top of the first panel allow adding, removing, rearranging and copy/pasting questions, the area on the right allows for the details to be entered.

To create a question:

1. Click the green + button to create a new question.
2. Ensure the new question is selected in the question list.
3. Type the question into the top middle text box. The font and style options can be used if required, and images can be embedded or used as a background.
4. Select "single choice" or "multiple choice" from the dropdown box. Single choice means that there is one answer for the question, multiple choice allows the student to select multiple options from the list.
5. Press the add choice button and edit the text for the first possible answer. Repeat for all possible answers.
6. Select the "correct answer" tab and tick the correct answer(s). This will allow AB Tutor to automatically mark the exam.

Repeat this process for all the questions in the exam. Once the exam is finished, click save. The preview option will allow you to see the exam as the students will.

Progress

When an exam is running, this tab will show you how the exam is going; which questions have been looked at and which have been answered, plus how long each question is taking the students. This allows the teacher to easily tell which questions are proving difficult and how far through the exam the students have got.

Previous Results

This tab gives access to the results from previously taken exams. Results can be shown by student, giving a summary and details (showing which questions they got right, wrong, and whether they looked at unanswered ones) and also by question, giving a summary of which answers were given for each question.

The results can be exported as an html table by selecting the **Export** button from the toolbar.

Using AB Tutor

Remote Deployment Utility

The AB Tutor Remote Deployment Utility allows installers to be pushed out to remote Windows machines without needing AB Tutor to be installed. It is intended mostly as an alternative to using Active Directory to deploy the software. It can also be used to modify the installer msi file to embed the connection password and other install options, in preparation for Active Directory deployment.
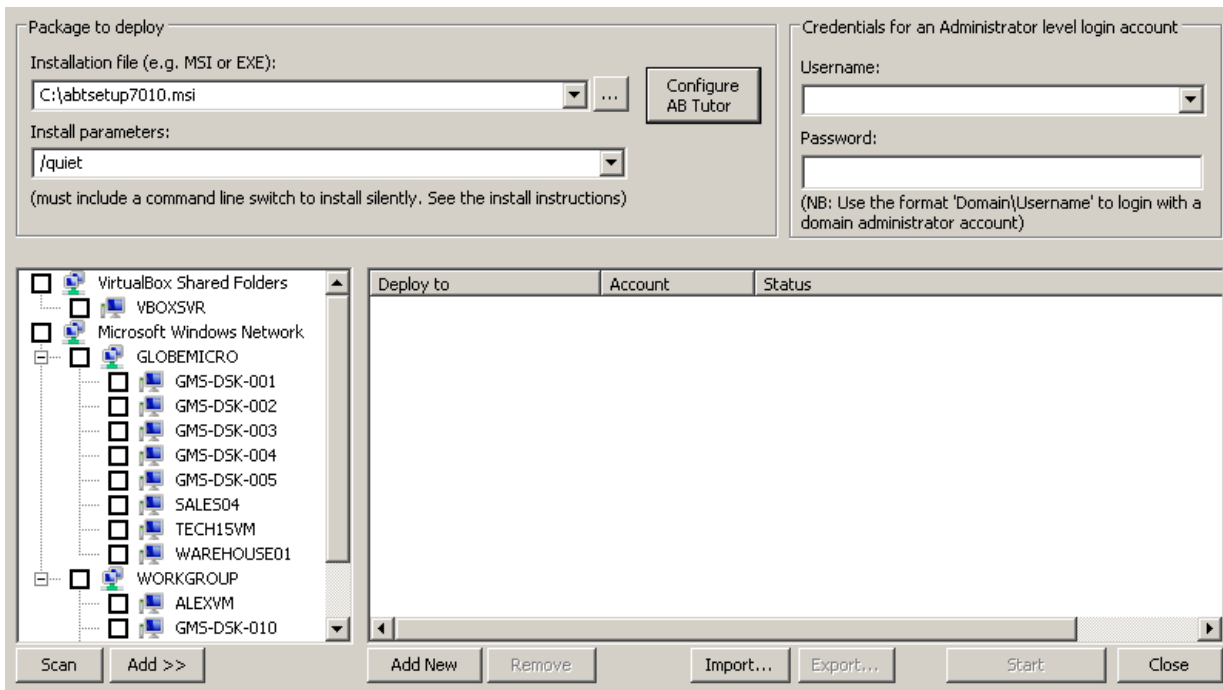
Creating a modified MSI

To create a modified MSI file for deployment outside the Remote Deployment Utility:

- Open the Remote Deployment Utility.
- Select the AB Tutor installer you wish to modify by selecting the [...] button.
- Select the **Configure AB Tutor** button and enter the details for the install:
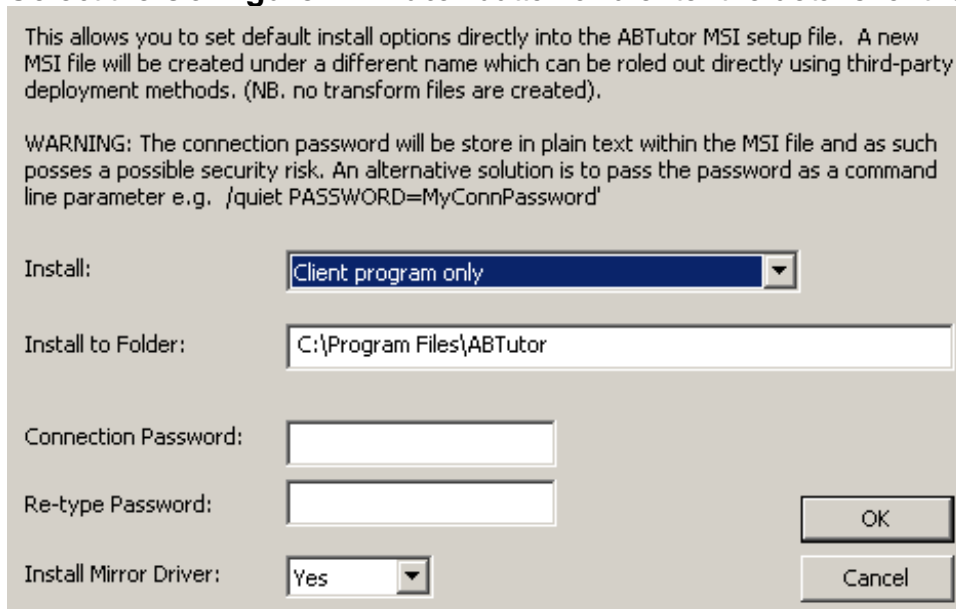
- Click **Start** to generate the new MSI. It will be created in the same directory as the original MSI file.

If you wish to actually install the software from the Remote Deployment Utility:

- Configure the install as above. (Not including clicking **Start**.)
- Select the computers you wish to install to from the left hand pane. Click **Add >>** to add them to the deploy list.
- If you need to add additional computers which weren't picked up from the scan, click the **Add New** button and enter the hostnames.
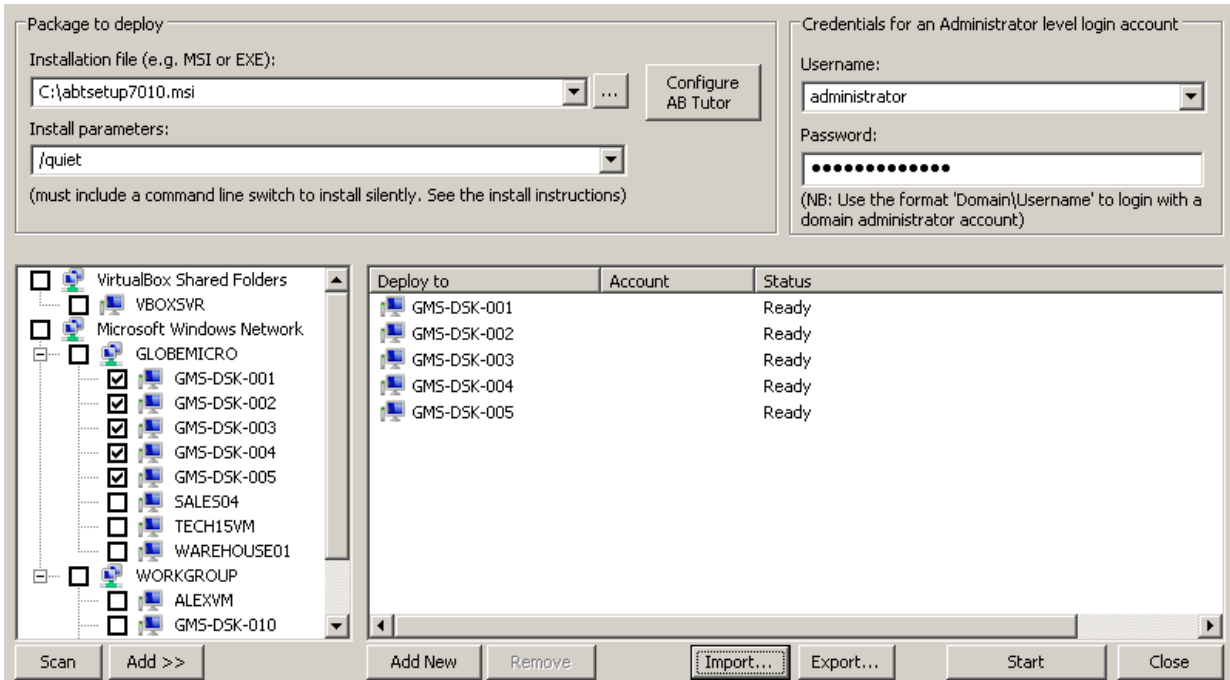
- If you wish to save or load a list of computers, use the **Export** and **Import** buttons.
- Enter the username and password for an account with administrator access to these computers in the top right.
- Press **Start**. The RDU will install the selected software on the remote machines. The **Status** entry will change to show the progress of the install.

The Remote Deployment Utility can be used to install any software which is provided as an msi file. Simply select the installer by pressing the ... button.

Terminal Server Support

Terminal Services is a component of Microsoft Windows operating systems (both client and server versions) that allows a user to access applications or data stored on a remote computer over a network connection without the need to install the application locally.

AB Tutor works on a terminal server by running an instance of the ABClient program in each session.

Installation

Run the **abtcsetup7.msi** set-up program on the terminal server and follow the simple on-screen instructions for installing the **'client'** program only. Apart from making sure the ABClient program is not blocked by the Windows or third party firewalls, no further setup is required.

Connection to Terminal Service Clients

To get a list of all the currently active terminal server sessions (or clients), you must first connect to the terminal server itself. Once a connection to the server has been established, a list of terminal server sessions are automatically displayed within the tutor programs connection list.

Terminal Server clients appear in the list with a different icon as opposed to the normal client icon .

Status of remote computers	Single Computer	Thin Client Session
Computer found, but not yet connected		
Attempting to connect or re-connect to computer		
Connected to computer, no user logged on		
Connected to computer with user logged on		
Connection to computer failed (including after shut down)		

Which TS client computers are added to the Tutor list are controlled in the same way as normal connections to a computer; via Groups (See Groups).

Configuring AB Tutor to Auto Connect to Terminal Servers

Because the tutor program must connect to a terminal server in order to display all connected client sessions, you can configure the program to automatically connect to your terminal server without even showing the server in the tutor list.

Select '**Tools**' - '**Settings**' and click on the '**Terminal Servers**' tab
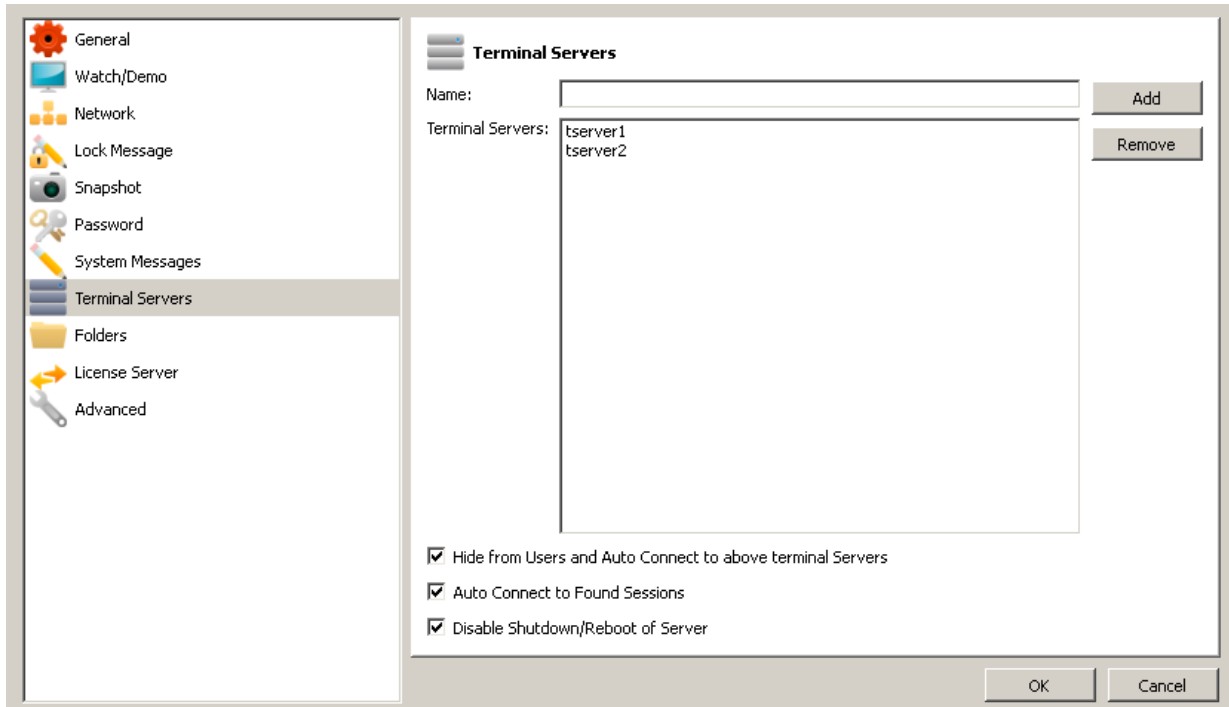
Enter the **name** of your terminal server and press the **Add** button.

Hide from Tutor and Auto connect...

Select this option to automatically connect to all the specified terminal servers at AB Tutor start-up (irrespective of whether they are part of a classroom group). If the tutor program is launched with Tutor access level, then these terminal server connections are not shown to the tutor but any connected clients will be shown depending on whether the client computer name exists within the selected Classroom Group.

Auto Connect to Found Sessions

Tick this option to automatically connect to any terminal server clients that become active.

Disable Shutdown/Reboot of Server

This is an extra level of security to prevent the terminal server from inadvertently being shutdown or rebooted.

Terminal Server Connection Status

Once you have connected to a session on a terminal server, the session status is shown in brackets after the normal status text.

WIN-13POMC0CEH6	SRCShell	Connected
WIN-13POMC0CEH6 (2)	station1	Connected (Active)

There are 2 main session states: **Active** and **Inactive**.

Active: This indicates that the session is active and a user is connected and using the session.

Inactive: This indicates that the session is running but the user is not actually connected. **NOTE**: in this state, you cannot view the sessions screen, if you try you will simply get a black screen. As soon as the session status changes to 'Connected' you will see what the remote user sees.

Applying policies to Terminal Servers

Most policies will work on Terminal Server clients in exactly the same way as on normal PC clients. The exception to this is the **Internet Block** option. As this works by blocking ports, it affects the entire computer instead of just the specified session. As a safety measure, **Internet Block** policies cannot be applied to a session, and must be applied to the server directly.

Licence Management System

In order to allow customers more flexibility in managing their AB Tutor Licences, an online Licence Management System has been developed. Upon purchasing a licence, an online account is created for every customer. Through the Licence Management System, a customer can:

- See how many licences they have purchased, how many have been activated, and how many are still free.
- Identify the computers on which the licences have been activated and when the software was last run on them.
- De-activate the software on computers on which it is no longer required, thus freeing up licences that can be used on another computer.
- Order and pay for more licences by credit card.

AB Tutor
» Key Features
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Support
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My User
» Change Password
» Request Download

Account
» Buy Licences

About Us
Contact

Account Details - Example School

Account Number: EXS01
Account Name: Example School
Street: 1234 Example Street

Created: 27 Nov 2012
Status: Active
Expiry Date: N/A

City: Exampleville
State/County: Exampleshire
Zip/PostCode: TE1 2ST
Country: United Kingdom

Serial: 29   e6

Products

Name	Licences	Allowed Installations	In Use

Installations

Name	Type	Created	Last Connected	Connections	Product	Version	Action

Invoices

No.	Date	Type	Account	Currency	Outstanding	Total

Orders

No.	Date	Type	Account	Currency	Total

Account Managers

E-mail	Created	Last Login	Status

The Licence Management System also covers purchasing and user management, allowing an administrator to keep an eye on all details of their account in a single place.

Licence Management Server

Creating an Account

Before using the AB Tutor website, you will need to set up a user account on the Licence Management System. The email address that you give will be your username. Setting up a user account allows you access to:

- Trial downloads
- Technical support
- Feature requests
- Knowledgebase

A user account can also be joined to an organisation account, allowing access to:

- Licence purchasing
- Licence Management:
    - Monitor connections
    - Free up in-use licences
- Manage existing orders and invoices

The Licence Management System can be accessed by going to www.abtutor.com/login

To create a new user, click the "Register Now" button and fill in your details on the registration page. When you click register, you will be sent an activation email.

Upon successful login as a new customer, you will see the following page:

From here, you can check pricing and request a trial copy of AB Tutor. If you wish to buy the software, you will need to link your user to a school or company account. If the school already has an account, please contact AB Tutor to have your user account linked to the school account.

If you are setting up a new school account, simply click on "Buy Licences". This will ask for the details to create a new school account, and when created will automatically link your user to the new school account.

This will automatically take you to the products page, allowing you to browse while your account awaits activation.

Licence Management System

Purchasing licences

Click the "Buy Licences" link to get to the products page. From here, you can choose how many licences you would like to buy. If you already have some licences, any additional ones will be charged at the discounted rate. Enter the number you wish to buy in the "Qty" box and select "Add to Cart".

You will now be shown a summary of your order. Please check this over, and when you're sure it's correct, add an order reference, confirm the terms and conditions and confirm the order.

Pay by credit/debit card

Select the **Buy** button. This will take you to an order confirmation page, allowing you to check your order and add an order reference for your records. Once you are happy with the details, read and tick the box for terms and conditions, and select the **Confirm Order** button. You will then be shown the invoice. Press **Pay Now** to enter your card details. Once the payment has been successful, you will get a paid invoice shown on screen as your order confirmation. Once your order has been placed, we will activate it and you will be able to start using the software.

Pay by purchase order

Select the **Quote** button. This will show you the order confirmation page, to allow you to check your order and add an order reference. Read and confirm the terms and conditions by ticking the checkbox, then select **Generate Quote**. This will display a quote, with a Quote # at the top.

Please contact us with your purchase order, referencing this quote number.

Licence Management System

Trial Download

To request a trial download:

- Click **Request Download**.
- Please ensure that your details are correct, and enter a reason for the request. This is to allow us to vet the trial download requests to ensure that they are from valid end users, as opposed to students trying to break into their school's system.
- Once your trial has been verified, an email confirmation will be sent. Once you have received this email, the **Request Download** link will be replaced with a **Download** link.
- The **Download** link will allow you to download and install the latest version of AB Tutor. Once installed, please see Licence Activation for instructions on how to activate the trial.

Licence Management System

Managing Licences

Your organisation account on the LMS will allow you to manage your licences and keep an eye on where they are in use and how many you have available. When you log in you will see a summary of your account. At the top are your **Account Details**, including your serial number. This is the serial number you will use whenever you install a copy of AB Tutor to register against the licence server.

Below this is the **Products** section. This shows what licenses you own, and hence how many copies of AB Tutor you are able to install. It also tells you how many of your available licences are currently in use:

Products				Add
Name		Licences	Allowed Installations	In Use
AB Tutor v6		0	40	9
AB Tutor v7		60	60	17

The next section shows your **Installations**. This is a complete list of all Tutor installations which are currently registered against the LMS. Each entry will show information about that licence:

Name	The friendly name assigned to this install
Type	The licence type - eg Normal, Roaming, Unlock Code, Site Licence
Created	The date and time this computer first connected to the LMS
Last Connected	The date and time this computer last connected to the LMS
Connections	How many times this computer has connected to the LMS
Product	The product type of this installation - eg Tutor 6, Tutor 7
Version	The version number of the installation. This allows you to quickly check whether any of your tutor installations need updating
Action	If there is a **Free** button, you can release this licence for reuse. Note that not all licence types can be freed up

Installations							
Name	Type	Created	Last Connected	Connections	Product	Version	Action
10-XP-PRO	Normal	24 Jul 2012 14:12:54	24 Jul 2012 14:12:54	1	Tutor 6	6.9.0.0	Free
11-XP-PRO	Normal	28 Aug 2012	28 Aug 2012	1	Tutor 6	6.9.0.0	Free

The next two sections show all past **invoices** and **orders**. These can be clicked on to show the full invoice or order for your records.

Finally, a list of **Account Managers** is shown. If you wish to have any added or removed, please contact us at support@abtutor.com. Similarly to installations, this will also show when account managers were created and when they last logged in.

Troubleshooting

Question	Answer/Solution
I have just installed the tutor program but it does not find any remote machines.	Please make sure you have installed the client program on all the machines to which you wish to connect. If this doesn't help, try adding the appropriate IP address ranges to **tools, settings network** to force those addresses to be scanned. Also, please see Connection Problems
The Tutor and Client programs are installed and running but the Tutor program does not find any remote clients.	This usually means that a firewall either on the Tutor or client side is blocking communications. Double-check the Windows firewall or third party Internet security software on the client and tutor machines. Also make sure any routers/hardware firewalls or switches are not blocking port 5151 Verify that the client program has installed and is running. (See **Windows-Services-AB Client Manager**) If machines are still not showing up, try creating groups with them in.
I can connect to the clients fine when using a direct LAN connection, but it fails to find the client when using a wireless connection.	Please check your wireless router has 'Multicast' enabled and does not block port 5151. If this doesn't help, try adding the appropriate IP address ranges to **tools, settings network** to force those addresses to be scanned. Also, please see Connection Problems If machines are still not showing up, try creating groups with them in. In order to allow the AB Tutor scan to find computers on different subnets, add the IP address ranges in **Tools, Settings, Network**
As soon as I try to connect to a remote machine it gives an 'Authentication failure' message and indicates an 'Invalid connection password'	This happens when the connection password saved in the tutor machine does not match the password set on the client. Please refer to the User Guide for information on working with passwords.
I can't connect when connecting to computers in a group, but can connect to them as normal from a scan.	There is probably a problem with your DNS server, it's giving the wrong IP addresses for the hostnames. This can be checked using **ping <hostname>** from the tutor and **ipconfig** on the client.
I can't seem to find the 'Tools' menu to be able to configure and set passwords. Neither can I create groups or policies.	To do this, you must have administrator level access to the tutor program. This is controlled through start-up passwords. See Startup Passwords.
Some of the remote machines keep unexpectedly disconnecting.	This happens when the connection between the tutor and client machine is lost or fails. This can happen when the remote machine is rebooted, powered off, the cable is disconnected, a network fault occurs (e.g. poor wireless signal), or a system failure. Try selecting and re-connecting to the machines.
	This is usually down to the setting of the router/switch between

The Tutor program cannot find clients across different subnets but within the same subnet it's fine.	subnets. Check the router or switch documentation and make sure that port 5151 is open and not blocked. You can also try adding IP ranges to scan (See **Tools - Settings - Network**). Alternatively, add the problem computers to groups and AB Tutor will be able to connect to them.
I'm running the Tutor program on a Win2003 Server and am getting the following message when I launch the program: • Unable to bind listening socket: an attempt was made to access a socket in a way forbidden by its access permissions. (10013)	This only happens on Windows Server 2003 machines running the AB Tutor program. There is a work around and it is to install and start the ABClient program on the Windows 2003 machine as well. Then, when you launch AB Tutor program it will warn you that the Client program is running and can cause a problem when Scanning for clients. When this message appears, select No to not stop the client program. AB Tutor program will scan the network to find the clients and should find them OK. You will get a warning message in the output window indicating that AB Tutor program will not be able to **Listen** for Clients. This is a feature that allows AB Tutor program to **pick up** Client machines that are switched on without the need to press the **Find** button again.
I get the following error message after launching the tutor program. • "setsockopt() IP_ADD_MEMBERSHIP address failed: The requested address is not valid in its context. (10049)"	This error message indicates that you do not have a network connection at all
I get the following message when trying to connect to a remote machine • Warning: (XYZ) Unable to resolve host by name: No such host is known (11001)	This message occurs when you are trying to connect to a machine by its name only not via the machine's IP address. When classroom groups are selected, only the computers name is stored since most machines have dynamic IP addresses. If your network supports DNS or WINS, then a computers IP address can be obtained simply from its name and you shouldn't get this error message. If not, then the tutor program must try to get the IP address from one of the following methods. During a scan any remote machines found will send back its IP address. If the scan does not find these machines, then every 10 seconds, each machine will broadcast its presence and send its IP address to the tutor. Once the tutor program has the remote machine IP address then a direct connection can be made.
Policies I apply to the remote machines disappear when the user logs off.	Check the policies are not temporary. Temporary policies are designed to clear when a user logs off or the tutor program is closed. Try using a permanent policy.
When I enter my Account Serial Number it fails to validate over the internet.	You must make sure the machine AB Tutor program is installed on has access to the internet. If you are using a Proxy Server to access the Internet, then these settings must be configured.

	After you get a message indicating a connection failure, you should see a Setup button. Press this button and enter your Proxy Server settings and press Activate once again.
I get an 'Access denied' error message when transferring files from the Tutor machine to the clients but onto a network drive not the local C drive.	This is to do with security rights the remote client program is running under. The ABClient runs as a Windows Service using the default Local SYSTEM account of the machine. Although the SYSTEM account normally has full access to the local machine, it does not have access to network resources. There are 2 solutions: 1. Change the account the AB Client service runs under to one with access right to the local machine and the network drive. 2. Change the security rights on the network drive to allow the local SYSTEM account to have access.
When I view a remote computer the screen shown is different to what's on that physical machine.	This is usually down to your DHCP and DNS server (or WINS if you use NetBios) not releasing/refreshing correctly. The Microsoft DNS services are meant to map the computers Name to its dynamically assigned IP address from the DHCP server. If your DNS server caches the IP addresses assigned to computer names and are not refreshed at the same rate as DHCP, then you will get these problems. Try changing the 'Lease Time' for your DHCP Server and make sure your DNS server refreshes on a regular basis. There is an option called 'Always dynamic update DNS A and Ptr records' in the DHCP setup, try enabling this.
When I collect event logs from a client, they don't appear on the tutor	Event logs not appearing is usually a permissions problem. In AB Tutor, please go to tools, settings, folders and ensure that the other tutors have write access to all the locations specified. We generally recommend setting them to "%MYDOCUMENTS%\AB Tutor\log" or similar - this puts them in the current user's "my documents", which more or less guarantees they have write access and keeps each tutor's logs and captures separate.
When installing, I get a "Not marked for installation" error	This error message is due to the Windows Installer registry becoming corrupted. To fix it, first ensure that AB Tutor is uninstalled from control panel ("add and remove programs" or "programs and features") then ensure "c:\Program Files\ABControl" and "c:\Program Files\ABTutor" have been deleted. This will probably require a reboot. If any files are still blocked, it will be because Windows still thinks it's in use. Go to a command prompt (start, run, "cmd") and enter: netsh winsock reset then reboot and delete the ABControl and ABTutor folders, the program should install successfully. If this doesn't fix it, Microsoft have a tool for cleaning up the installer registry. For Windows XP, please use the tool at http://support.microsoft.com/kb/971187 or for Windows Vista/7 http://support.microsoft.com/mats/Program_Install_and_Uninstall - these will fix your installation logs and allow the installer to run.

Settings aren't getting saved (especially Windows 7)	The user probably doesn't have write access to the config file. To fix this, load Windows Explorer and go to c:\ProgramData\AB Tutor\ (or wherever you keep the log file if you are specifying it manually) and find the file ABControl.xml. Right click, select properties, security, edit, users and ensure that the user who is having the problem has "allow" for "full control". This will allow the user to edit the file, and so any changes to the settings will be saved.

Troubleshooting

Error Codes

10013	An attempt was made to access a socket in a way forbidden by its access permissions.
10024	Too many open sockets.
10035	A non-blocking socket operation could not be completed immediately.
10036	A blocking operation is currently executing.
10037	An operation was attempted on a non-blocking socket that already had an operation in progress.
10038	An operation was attempted on something that is not a socket.
10039	A required address was omitted from an operation on a socket.
10041	A protocol was specified in the socket function call that does not support the semantics of the socket type requested.
10043	The requested protocol has not been configured into the system, or no implementation for it exists.
10044	The support for the specified socket type does not exist in this address family.
10045	The attempted operation is not supported for the type of object referenced.
10046	The protocol family has not been configured into the system or no implementation for it exists.
10047	An address incompatible with the requested protocol was used.
10048	Only one usage of each socket address (protocol/network address/port) is normally permitted.
10049	The requested address is not valid in its context.
10050	A socket operation encountered a dead network.
10051	A socket operation was attempted to an unreachable network.
10052	The connection has been broken due to keep-alive activity detecting a failure while the operation was in progress.
10053	An established connection was aborted by the software in your host machine.
10054	An existing connection was forcibly closed by the remote host.
10055	An operation on a socket could not be performed because the system lacked sufficient buffer space or because a queue was full.
10056	A connect request was made on an already connected socket .
10057	A request to send or receive data was disallowed because the socket is not connected and no address was supplied.
10058	A request to send or receive data was disallowed because the socket had already been shut down in that direction with a previous shutdown call.
10060	A connection attempt failed because the connected party did not properly respond after a period of time, or established connection failed because connected host has failed to respond.
10061	No connection could be made because the target machine actively refused it.
10062	Cannot translate name.
10063	Name component or name was too long.
10064	A socket operation failed because the destination host was down.

10065	A socket operation was attempted to an unreachable host.
10067	A Windows Sockets implementation may have a limit on the number of applications that may use it simultaneously.
10070	File handle reference is no longer available.
10091	WSAStartup cannot function at this time because the underlying system it uses to provide network services is currently unavailable.
10092	The Windows Sockets version requested is not supported.
10093	Either the application has not called WSAStartup, or WSAStartup failed.
10101	Returned by WSARecv or WSARecvFrom to indicate the remote party has initiated a graceful shutdown sequence.
10105	The requested service provider is invalid.
10106	The requested service provider could not be loaded or initialized.

Troubleshooting

Speed Optimisation

The best way to get fast remote control displays is to have fast PCs with good video cards and fast network connections. You get what you pay for!

This is not always possible, particularly in educational environments, so below are some further ways to speed up remote control.

Make sure all the remote workstations in the classroom are of similar specification and have the same operating system and applications installed.

Use good graphics cards with plenty of on-board memory.

Do not set the screen resolution to higher than 1280x1024. The higher res the screen, the more data needs to be transferred. This is especially important on the Tutor's machine when giving a demonstration to student machines.

Try to avoid animation or video on the Tutor machine if giving demonstrations. This creates lots of changes on the screen and hence lots of data needs to be transferred.

Consider turning off Windows Aero and transparency, especially on Tutor PCs.

Make sure you network is running at at least 100Mbits not 10Mbits. 1000Mbits (Gigabit) is ideal.

On Windows machines, use the Mirror Driver to speed up screen change detection.

Appendix 1 - Deploying the MSI through Group Policy

This tutorial will describe how to deploy the AB Client program on multiple machines by using Active Directory - Group Policies.

Methods of deployment

Group Policy supports two methods of deploying a MSI package:

- **Assign software** - A program can be assigned per-user or per-machine. If its assigned per-user, it will be installed when the user logs on. However, if its assigned per-machine then the program will be installed for all users when the machine starts.
- **Publish software** - A program can be published for one or more users. This program will be added to the Add or Remove Programs list and the user will be able to install it from there.

Create a distribution point

The first step in deploying a MSI through GPO is to create a distribution point on the publishing server. This can be done by following these steps:

- log on to the server as an Administrator user
- create a shared network folder (this folder will contain the MSI package)
- set permissions on this folder in order to allow access to the distribution package
- copy the MSI in the shared folder

In the shared folder you can also perform an administrative install for a MSI package contained by an EXE bootstrapper.

Create a Group Policy Object

A MSI package is deployed (distributed) through GPO as a Group Policy Object. In order to create an object for your package, you can follow these steps:

- click on the **Start** button, go to **Programs**, select **Administrative Tools** and then select **Active Directory Users and Computers**
- right-click your domain name in the console tree and select the **Properties** context menu
- select the **Group Policy** tab and click **New**
- set the name of the policy (for example AB Client Application)
- click **Properties** and select the **Security** tab
- check the **Apply Group Policy** checkbox only for the groups to which the policy will be applied
- click on the **OK** button

Assign a MSI package

A package can be assigned per-user or per-machine. Also, if the package is assigned, it will automatically be installed silently. In order to assign a package you can follow these steps:

- click on the **Start** button, go to **Programs**, select **Administrative Tools** and then select **Active Directory Users and Computers**

- right-click your domain name in the console tree and select the **Properties** context menu
- go to the **Group Policy** tab, select the object you want and click **Edit**
- expand **Software Settings** under **Computer Configuration**
- right-click **Software Installation**, select the **New** context menu and then click on **Package**
- in the **Open** dialog type the full UNC path of the shared package you want to assign
- click on the **Open** button
- click on **Assigned** and then click **OK** (the package will be added to the right pane of the "Group Policy" window)
- close the **Group Policy** snap-in, click **OK** and exit the **Active Directory Users and Computers** snap-in
- when the client computers start, the assigned package will be installed automatically

Do not use the **Browse** button in the **Open** dialog to access the UNC location. Make sure that you use the UNC path to the shared package.

Publish a MSI package

When using Group Policy, you can publish a package in order to allow the target user to install it by using **Add or Remove programs**. The steps for publishing a package are:

- click on the **Start** button, go to **Programs**, select **Administrative Tools** and then select **Active Directory Users and Computers**
- right-click your domain name in the console tree and select the **Properties** context menu
- go to the **Group Policy** tab, select the object you want and click **Edit**
- expand **Software Settings** under **User Configuration**
- right-click **Software Installation**, select the **New** context menu and then click on **Package**
- in the **Open** dialog type the full UNC path of the shared package you want to publish
- click on the **Open** button
- click on **Publish** and then click **OK** (the package will be added to the right pane of the "Group Policy" window)
- close the **Group Policy** snap-in, click **OK** and exit the **Active Directory Users and Computers** snap-in
- test the package:
  - log on to the target computer
  - click on the **Start** button and go to **Control Panel**
  - double-click the **Add or Remove programs** applet and select **Add New Programs**
  - in the **Add programs from your network** list select the program you published
  - use the **Add** button to install the package
  - click **OK** and then **Close**

Do not use the **Browse** button in the **Open** dialog to access the UNC location. Make sure that you use the UNC path to the shared package.

Redeploy a MSI package

Sometimes you may need to redeploy a package (for example when doing an upgrade). For redeploying a package you can follow these steps:

- click on the **Start** button, go to **Programs**, select **Administrative Tools** and then select **Active Directory Users and Computers**
- right-click your domain name in the console tree and select the **Properties** context menu
- go to the **Group Policy** tab, select the object you used to deploy the package and click **Edit**
- expand the **Software Settings** element (per-user or per-machine) which contains the deployed package

- expand the **Software Installation** element which contains the deployed package
- right-click the package in the right pane of the **Group Policy** window
- select the **All Tasks** menu and click **Redeploy application**
- click the **Yes** button for reinstalling the application wherever it is installed
- close the **Group Policy** snap-in, click **OK** and exit the **Active Directory Users and Computers** snap-in

Remove a MSI package

Group Policy also allows you to remove packages which have been deployed in the past. Here are the steps for removing a package:

- click on the **Start** button, go to **Programs**, select **Administrative Tools** and then select **Active Directory Users and Computers**
- right-click your domain name in the console tree and select the **Properties** context menu
- go to the **Group Policy** tab, select the object you used to deploy the package and click **Edit**
- expand the **Software Settings** element (per-user or per-machine) which contains the deployed package
- expand the **Software Installation** element which contains the deployed package
- right-click the package in the right pane of the **Group Policy** window
- select the **All Tasks** menu and click **Remove**
- select from the following options:
  - **Immediately uninstall the software from users and computers**
  - Allow users to continue to use the software but prevent new installations
- click the **OK** button to continue
- close the **Group Policy** snap-in, click **OK** and exit the **Active Directory Users and Computers** snap-in

Appendices

Appendix 2 - Registry Restrictions

This appendix covers the advanced registry controls which can be applied to Windows PCs through Registry Control Policies. See Creating policies for more information on policies.
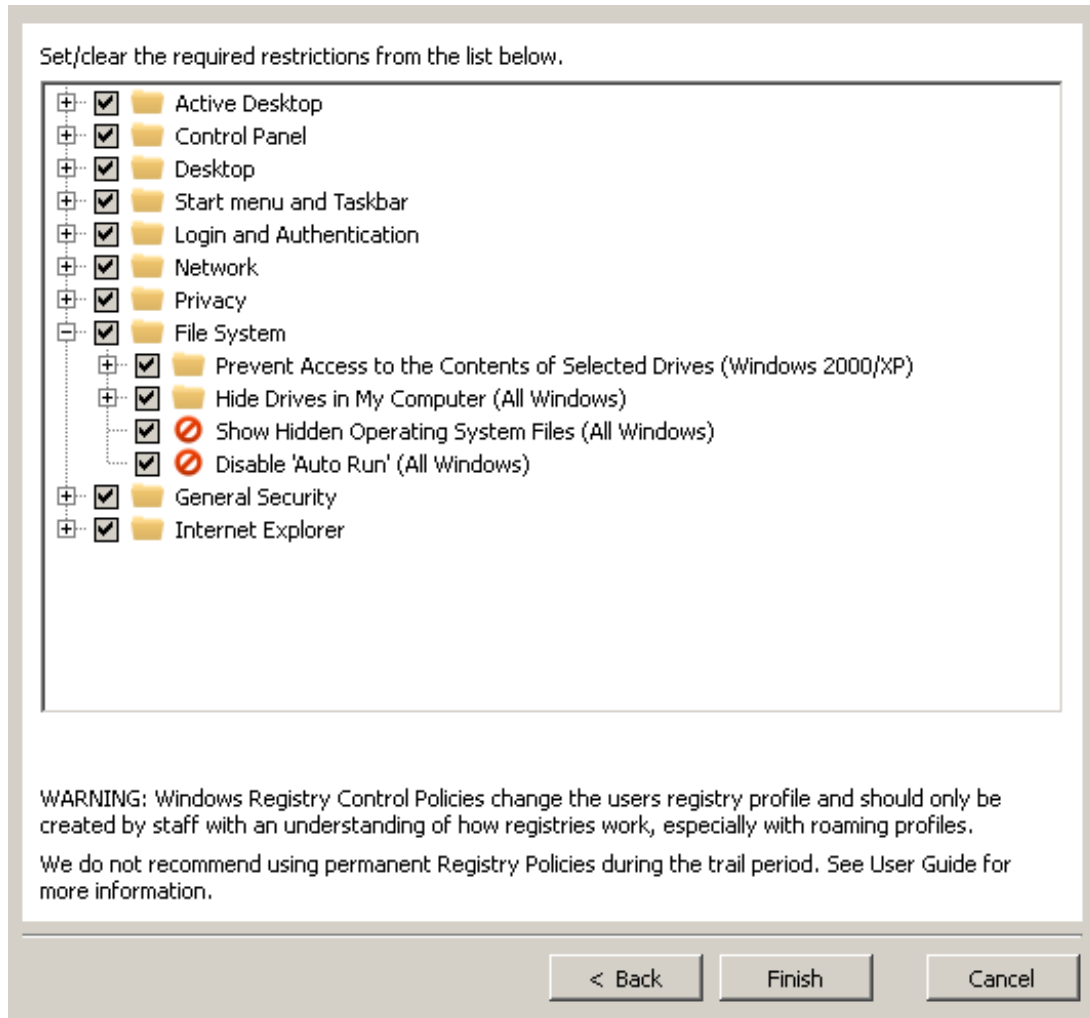
The controls are separated off into catagories, any entry or entire catagory can be activated or deactivated by clicking the tickbox:

- ☑: Unchanged
- ☐: Inactive
- ☑: Active

Contents

- **Active Desktop**

  - **Disable Active Desktop (All Windows)**
    This will disable the use of the Active Desktop feature.

  - **Force the Use of Active Desktop (All Windows)**
    The user is normally given the option of disabling Active Desktop through the display properties. This removes the ability to disable Active Desktop.

  - **Active Desktop Restrictions (All Windows)**
    Features of the Windows Active Desktop can be selectively controlled by modifying options in the Windows registry.

    - Disable the ability to change wallpapers.
    - Disable components.
    - Disable the ability to add components.
    - Disable the ability to delete components.
    - Disable the ability to edit components.
    - Prevents adding, dragging, dropping and closing the Taskbar's toolbars.
    - Restrict adjustments to desktop toolbars

  - **Remove Active Desktop Options from the Settings Menu (All Windows)**
    The will remove the Active Desktop options from Settings on the Start Menu.

  - **Restrict Changes to Active Desktop Settings (All Windows)**
    This allows you to have Active Desktop enabled, but to restrict any changes to the settings.

- **Control Panel**

  - **Display**

    - **Deny Access to the Display Settings (All Windows)**
      This option disables the display settings control panel icon, and stops users from accessing any display settings.

    - **Restrict Desktop Theme Controls (Windows XP)**
      These restrictions control access to the desktop theme settings including the Windows styles, buttons, schemes and fonts.

      - Disable the "Windows and buttons" style control
      - Disable the "Colour scheme" control
      - Disable the "Font size" control

    - **Hide the Themes Settings Page (Windows XP)**
      This option hides the Themes tag which prevents the user from selecting an alternate theme. Themes normally include a background plus sounds, icons and other elements.

    - **Hide the Display Settings Page (All Windows)**
      This option hides the Settings page from the display properties control.

    - **Hide the Screen Saver Settings Page (All Windows)**
      This option hides the screen saver page from the display settings control, which stops users having access to change screen saver settings.

- **Hide the Display Background Page (All Windows)**
  This option hides the background page stopping users from changing any background display settings.

- **Hide the Display Appearance Page (All Windows)**
  When enabled this setting hides the display settings appearance page.

- **Printers**

  - **Disable the Addition of Printers (All Windows)**
    Any user can add a new printer to their system, this option once enabled disables the addition of new printers to the computer.

  - **Disable the Deletion of Printers (All Windows)**
    Printers can be deleted simply by any user pressing the delete key, enabling this setting stops users from being able to delete printers.

- **Hide Set Program Access and Defaults in Add/Remove Programs (Windows 2000/XP)**
  This restriction is used to hide "Set Program Access and Defaults" on the Add or Remove Programs page. This feature was introduced with Windows XP SP1 and Windows 2000 SP3 to allow users to configure the default applications used on the PC.

- **Disable Control Panel (Windows 2000/XP)**
  This setting allows you to restrict user access to the Control Panel options and settings.

- **Hide Control Panel Applets (Windows NT/2000/XP)**
  This allows you to show or hide specific applets found in the Windows Control Panel.

  - Accessibility Applet
  - Add/Remove Programs Applet
  - Console Applet
  - Date and Time Applet
  - Display Applet
  - Fax Applet
  - Hardware Wizard Applet
  - Infrared Port Applet
  - International and Regional Applet
  - Internet Settings Applet
  - Joystick Applet
  - Licensing Applet
  - Mouse and Keyboard Applet
  - Mail Applet
  - Sound and Multimedia Applet
  - Modem and Phone Applet
  - Network and connectivity Applet
  - Network and Dial-up Connectivity Applet
  - Netware Client Applet
  - ODBC Applet
  - PC Card Applet
  - Ports Applet
  - Power Management Applet
  - Scanner and Camera Applet
  - Server Manager Applet
  - Speech Properties Applet

- System Applet
- Telephony Applet
- TweakUI Applet
- User Manager Applet
- WSP Client Applet
- QuickTime Applet
- Norton Live Update Applet
- Compaq Insight Agents Applet

- **Hide Control Panel, Printer and Network Settings (All Windows)**
  This restriction removes the Control Panel, Printers and Network Connection settings from the Start menu. If the Taskbar settings are also hidden it causes the Settings menu to be completely removed.

- **Add or Remove Programs Restrictions (Windows 2000/XP)**
  These restrictions apply to the Add/Remove Programs feature of Control Panel. They allow you to entirely or individually disable components.

  - Disable Add/Remove Programs
  - Disable Change and Remove Programs
  - Disable Add Programs
  - Disable Windows Components Wizard
  - Hide "Add a program from CD-ROM or disk" option
  - Hide "Add programs from Microsoft" option
  - Hide "Add programs from your network" option
  - Go directly to Windows Components Wizard
  - Disable Support Information

Desktop and Explorer

- **Hide All Items on the Desktop (All Windows)**
  Enabling this option hides all the items and programs on the Windows desktop.

- **Remove Shared Documents from My Computer (Windows XP)**
  The Shared Documents folder allows users to easily share files and folders over a network. This restriction will remove the "Shared Documents" object from My Computer

- **Hide the Internet Explorer Icon (All Windows)**
  This option hides the Internet Explorer icon from the Windows desktop.

- **Remove My Documents from the Desktop (All Windows)**
  This setting is used to remove the My Documents folder from the Windows desktop.

- **Disable the Ability to Right Click on the Desktop (All Windows)**
  This removes the context menu that would normally appear when the user right clicks on the desktop or in the Explorer right results pane.

- **Restrict the Screen Saver (Windows 2000/XP)**
  This restriction can be used to specify the screen saver or to stop screen savers from running. Also, the Screen Saver settings page is disabled, so users cannot change the screen saver options.

- **Screen Saver Password Protection Policy (Windows 2000/XP)**
  This restriction determines whether the screen saver is password protected and prevents users from changing the password-protection setting.

- **Enforce Shell Extension Security (All Windows)**
  This restriction can be used to limit the system to only run files that have an approved shell extension.

- **Remove the Security Tab (Windows XP)**
  This restriction removes the Security tab from Windows explorer which prevents users from accessing or changing the security permissions of folder and file objects.

- **Remove the Hardware Tab (Windows 2000/XP)**
  This restriction removes the hardware tab from applicable items in the Control Panel and from the local drive properties. This prevents users from changing the hardware device properties.

- **Disable the Ability to Customize Toolbars (All Windows)**
  By right clicking on a toolbar you are usually given the option to Customize, which allows you to change which functions are available from the toolbar. This allows you to disable that function.

- **Remove the Option to Change or Hide Toolbars (All Windows)**
  By default users are able to select which toolbars are displayed either be right clicking the toolbar itself, or by changing the options from the View menu. This locks the toolbars, removing the ability to change which are displayed.

- **Remove File Menu from Explorer (All Windows)**
  This setting is used to remove the File option from the Explorers toolbar.

- **Remove My Computer from the Desktop and Start Menu (Windows 2000/XP)**
  This restriction removes My Computer from the desktop and Start menu.

- **Hide the Network Neighborhood Icon (All Windows)**
  The Network Neighborhood icon is shown on the Windows desktop whenever Windows networking is installed; by enabling this setting the icon will be hidden.

- **Disable Folder Options Menu (All Windows)**
  This allows you to hide the Folder Options function from the folder Tools menu allowing you to restrict access to numerous advanced folder features.

- **Remove Properties from My Computer (Windows XP)**
  This restriction removes the properties option from My Computer and hides the "System Properties" screen.

- **Remove the Ability to Modify File Types (Windows 2000/XP)**
  This setting allows you to remove the ability to change, add or delete file types using explorer the Folder Options interface.

- **Disable Save Settings at Exit (All Windows)**
  When Windows exits it normally saves the desktop layout, including icon location, appearance and other parameters. This setting disables any changes from being saved, therefore allowing you to preserve a configured layout.

Login and Authentication

- **Restrict Showing the Last Username (Windows 2000/XP)**
  This restriction removes the ability to view which user was last logged onto a computer by clearing the username box on the login screen.

- **Disable the Lock Workstation Button (Windows NT/2000/XP)**

Add this setting to the registry to stop unauthorized users from locking machines from the Windows Security dialog box.

- ○ **Disable the Change Password Button (Windows NT/2000)**
  This setting disables the 'Change Password' button on the Windows Security dialog box. Enabling this setting stops casual users from being able to change the password.

- **Network**

  - ○ **Network Connection Restrictions (Windows 2000/XP)**
    These restrictions control access to the features and properties of LAN, RAS and other network connections.

    - Restrict add and remove network components
    - Restrict changes to Advanced Settings
    - Restrict changes to advanced TCPIP configuration
    - Restrict changes to protocol and service bindings
    - Restrict deletion of public RAS connections
    - Restrict deletion of RAS connections
    - Restrict changes to the Dial-up Preferences
    - Enable Windows 2000 network connections for administrators
    - Restrict access to component properties of a LAN connection
    - Restrict connecting and disconnecting a LAN connection
    - Restrict access to properties of a LAN connection
    - Disable the Network Connection wizard
    - Restrict access to properties of public RAS connections
    - Restrict access to properties of a RAS connection
    - Restrict connecting and disconnecting a RAS connection
    - Restrict access to private RAS connection properties
    - Restrict renaming of public RAS connections
    - Restrict renaming of connections
    - Restrict renaming of LAN connections
    - Restrict renaming of private RAS connections
    - Disable status statistics for an active connection

  - ○ **Remove Log Off from the Start Menu (All Windows)**
    This allows you to remove the Log Off [Username] option from the Start menu.

  - ○ **Disable Recent Shares in Network Places (Windows 2000/XP)**
    This restriction stops remote shared folders from being added to Network Places whenever you open a document in the shared folder.

  - ○ **Hide the Active Directory Folder in My Network Places (Windows 2000)**
    This restriction is used to remove the Active Directory folder from My Network Places. This still allows users to search but not browse the Active Directory.

  - ○ **Hide Entire Network in Network Neighborhood (All Windows)**
    Entire Network is an option under Network Neighborhood that allows users to see all the Workgroups and Domains on the network. Entire Network can be disabled, so users are confined to their own Workgroup or Domain.

  - ○ **Hide Workgroup Content from Network Neighborhood (All Windows)**
    Enabling this option hides all Workgroup contents from being displayed in Network Neighborhood.

  - ○ **Remove the Map and Disconnect Network Drive Options (Windows NT/2000/XP)**

Prevents users from making additional network connections by removing the Map Network Drive and Disconnect Network Drive buttons from the toolbar in Explorer and also removing them from the Context menu of My Computer and the Tools menu of Explorer.

- **Hide Computers Near Me in Network Places (Windows 2000/XP)**
  This setting allows you to show or hide the computers listed Near Me in My Network Places.

- **Privacy**

  - **Empty Temporary Internet Files on Exit (All Windows)**
    This setting controls whether Internet Explorer should delete all of the temporary Internet files stored during the session when the browser is closed.

  - **Clear the Cached Run Commands (All Windows)**
    Do you have a lot of items in the run command history on Start Menu? This will allow you to clear the most-recently-used (MRU) list.

  - **Clear the Internet Explorer Typed Address History (All Windows)**
    Internet Explorer caches any URLs that are typed into the address bar. This may become a privacy issue on a shared computer, or a nuisance if there is a particular URL you want to remove without clearing the whole history.

  - **Disable User Tracking (Windows 2000/XP)**
    This setting stops Windows from recording user tracking information including which applications a user runs and which files and documents are being accessed.

- **Start menu and Taskbar**

  - **Documents and Folders**

    - **Remove Favorites from the Start Menu (All Windows)**
      This allows you to remove the Favorites folder from the Start Menu.

    - **Remove Recent Documents from the Start Menu (All Windows)**
      This setting can be used to remove the recent Documents folder from the Start Menu.

    - **Remove Network Connections from the Start Menu (Windows 2000/XP)**
      This allows you to hide the Network and Dial-up Connections option on the Start Menu.

    - **Disable Recent Documents History (All Windows)**
      Normally when you open or access a document or file it is added to the list of recent documents on the Start Menu. This will stop files from being added to the list.

    - **Remove My Documents from the Start Menu (Windows 2000/XP)**
      This restriction removes My Documents which is shown under the Documents folder on the Start Menu.

    - **Remove My Pictures from the Start Menu (Windows 2000/XP)**
      This restriction removes My Pictures from the Documents folder on the Start Menu.

    - **Remove My Music from the Start Menu (Windows 2000/XP)**

This restriction removes My Music from the Documents folder on the Start Menu.

- **Hide or Display Administrative Tools Menu (Windows 2000/XP)**
  As with Windows NT, Windows 2000 has an 'Administrative Tools' folder on the Start Menu. This folder contains powerful administration utilities and therefore can be hidden to avoid accidental use.

- **Remove the Windows Security on Start Menu (Windows Terminal Server)**
  This setting is used to hide the Windows NT Security menu item on the Start Menu of a terminal server session. These settings are compatible with Windows Server 2003.

- **Hide Control Panel, Printer and Network Settings (All Windows)**
  This restriction removes the Control Panel, Printers and Network Connection settings from the Start menu. If the Taskbar settings are also hidden it causes the Settings menu to be completely removed.

- **Hide the Taskbar Settings on the Start Menu (All Windows)**
  This restriction removes the Taskbar and Start Menu item from the Control Panel, and it also removes the Properties item from the Start menu context menu.

- **Remove Common Program Groups from Start Menu (All Windows)**
  Disables the display of common groups when the user selects Programs from the Start menu.

- **Remove My Network Places from the Start Menu (Windows XP)**
  This restriction hides the My Network Places button on the Windows XP simple Start menu.

- **Force Logoff on the Start Menu (Windows 2000/XP)**
  This setting forces the Logoff button to appear on the Start menu and prevents users from removing or hiding it.

- **Restrict the Start Menu Log Off Option (Windows 2000/XP)**
  This restriction removes the ability for a user to enable the "Log Off..." option on the Start Menu.

- **Disable Drag-and-Drop on the Start Menu (Windows 2000/XP)**
  This restriction prevents users from modifying the Start menu by dragging and dropping items.

- **Remove Run from the Start Menu (All Windows)**
  Removes the ability to launch commands or processes from the Start menu by removing the Run option.

- **Remove Search from the Start Menu (All Windows)**
  This restriction removes the Search feature from the Start Menu.

- **Remove the Help Option from the Start Menu (Windows 2000/XP)**
  This restriction removes the Help option from the Start Menu.

- **Remove Tray Items from Taskbar (Windows XP)**
  This setting removes and restricts access to the tray icons normally found next to the clock on the taskbar.

- **Disable Taskbar Context Menus (All Windows)**
  This setting removes the context menus (right click on the taskbar) for the system tray, including the Start button, Tab control, and Clock.

- **Remove the Toolbars on the Taskbar (Windows XP)**
  This restriction is used to remove all the toolbars, including Quick Launch, from the taskbar. It also restricts the ability to re-enable them.

- **Lock the Taskbar (Windows XP)**
  This restriction is used to force the locking of the taskbar and restrict users from making any changes to its position.

- **Force the Use of the Classic Start Menu (Windows XP)**
  This restriction forces users to use the classic Windows start menu, instead of the new format introduced with Windows XP.

- **Hide the Taskbar Clock (Windows XP)**
  This setting allows you to remove the clock from the system tray on the taskbar.

• File System

- **Prevent Access to the Contents of Selected Drives (Windows 2000/XP)**
  This restriction prevents users from using My Computer or Explorer to access the content of selected drives. Also, they cannot use Run, Map Network Drive, or the Dir command to view the directories on these drives.

- **Hide Drives in My Computer (All Windows)**
  This setting allows you to control which drives are visible in My Computer and Explorer. It is possible to hide all drives or just selected ones.

- **Show Hidden Operating System Files (All Windows)**
  This setting controls whether the normally hidden operating system files should be displayed when using explorer to browse the file system.

- **Disable 'Auto Run' (All Windows)**
  Determines whether the Autoplay feature is enabled on each drive connected to the system. When Autoplay is enabled, media is started automatically when it is inserted in the drive.

• General Security

- **Disable Task Manager (Windows NT/2000/XP)**
  This setting controls the ability for users to start Task Manager and view processes, running applications and make changes to the priority or state of the individual processes.

- **Disable Registry Editing Tools (All Windows)**
  This restriction disables the ability to interactively run the standard Microsoft registry editing tools such as REGEDIT and REGEDT32.

- **Disable the Shut Down Command (All Windows)**
  This option allows you to stop users from being able to shutdown the computer by disabling the shut down command.

- **Disable Fast User Switching Command (Vista/7)**
  This option allows you to stop users from using Fast User Switching.

- **Disable the Windows Hotkeys (All Windows)**
  This restriction allows you to disable the use of the Windows hotkey combinations that provide shortcuts to the Start Menu and task swapping.

- **Restrict Access to the Windows Update Feature (All Windows)**
  The Windows Update feature allows users to easily update Windows components and software over the Internet. These settings allow can be used to grant or restrict access to this function.

- **Disable Command Prompt and Batch Files (Windows 2000/XP)**
  This restriction allows you to selectively disable the Command Prompt (CMD) and the ability to execute DOS batch files.

- **Disable command prompt but allow batch files (Windows 2000/XP)**
  This restriction allows you to disable the command prompt but allow the ability to execute DOS batch files.

- **Restrict Changes to User Folder Locations (Windows 2000/XP)**
  These restrictions disable the ability for users to change the location of user-specific folders such as My Documents, My Pictures, My Music and Favorites.

- **Restrict changes to My Documents**

  - Restrict changes to My Pictures
  - Restrict changes to My Music
  - Restrict changes to Favorites

Internet Explorer

- **Internet Explorer Toolbar Restrictions (All Windows)**
  These restrictions allow you to selectively control which toolbars are available in Internet Explorer, including the Address, Tool and Links bars.

  - Disable the ability to change toolbar selection.
  - Disable the address bar.
  - Disable the tool bar.
  - Disable the links bar.

- **Restrict Import and Export of Internet Explorer Settings (All Windows)**
  This restriction can be used to disable the import and export of Internet Explorer cookies and favorites. When users utilize the "Import and Export" wizard on the File menu they will be shown a message when clicking "Finish".

- **Internet Explorer Restrictions (All Windows)**
  These settings and restrictions allow you to selectively control a range of features available in Microsoft Internet Explorer 5 and 6.

  - Always prompt user when downloading files.
  - Disable changes to browsers bars.
  - Disable the option of closing Internet Explorer.
  - Disable right-click context menu.
  - Disable the Tools > Internet Options menu.
  - Disable the ability to Save As.
  - Disable the Favorites.
  - Disable the File > New command.
  - Disable the File > Open command.
  - Disable the Find Files command.
  - Disables the Forward and Back navigation buttons
  - Disable Open in New Window option.
  - Remove Print and Print Preview from the File menu.
  - Disable the option of selecting a download directory.

- Disable the Full Screen view option.
- Disable the ability to view the page source HTML.
- Remove Mail and News menu item.

- **Empty Temporary Internet Files on Exit (All Windows)**
This setting controls whether Internet Explorer should delete all of the temporary Internet files stored during the session when the browser is closed.

- **Clear the Internet Explorer Typed Address History (All Windows)**
Internet Explorer caches any URLs that are typed into the address bar. This may become a privacy issue on a shared computer, or a nuisance if there is a particular URL you want to remove without clearing the whole history.

- **Disable Save As Web Page Complete (All Windows)**
This restriction disables the ability to save complete web pages including images, scripts, linked files and other elements in Internet Explorer.

- **Disable the Ability to Customize Toolbars (All Windows)**
By right clicking on a toolbar you are usually given the option to Customize, which allows you to change which functions are available from the toolbar. This allows you to disable that function.

- **Remove the Option to Change or Hide Toolbars (All Windows)**
By default users are able to select which toolbars are displayed either be right clicking the toolbar itself, or by changing the options from the View menu. This locks the toolbars, removing the ability to change which are displayed.

- **Disable File Download in Internet Explorer (All Windows)**
This setting allows you to restrict the ability to download files using Internet Explorer.

- **Disable Access to File URLs in Internet Explorer (All Windows)**
Normally you can use the Internet Explorer address bar to access standard files and folders. This setting disables that functionality and only allows access to Internet URLs.

- **Internet Explorer Control Panel Restrictions (All Windows)**
These allow you to control access to the Internet Explorer setup and control panel functions (found under Tools -> Internet Options).

- **Prevent changes to advanced settings**

  - Prevent changes to Automatic Configuration
  - Prevent changes to temporary file settings
  - Prevent changes to calendar and contacts
  - Prevent changes to security certificates
  - Prevent changes to default browser check
  - Prevent Colour changes
  - Prevent changes to connection settings
  - Disable the Connection Wizard
  - Disable font changes
  - Disable changes to History settings
  - Disable changes to Home Page settings
  - Disable Language changes
  - Disable Links changes
  - Disable Messaging changes
  - Disable changes to Profiles
  - Disable changes to Proxy settings

- Disable Ratings changes
- Disable changes to Wallet settings
- Disables all options under Accessibility
- Removes General tab
- Removes Security tab
- Removes Content tab
- Removes Connections tab
- Removes Programs tab
- Removes Privacy tab
- Removes Advanced tab
- Prevents changing Personal Certificate options
- Prevents changing Site Certificate options
- Prevents changing Publisher Certificate options
- Prevents changing Security Levels for the Internet Zone
- Prevents adding Sites to any zone
- Prevents changes to privacy settings
- Disables AutoComplete for forms
- Prevents Prompt me to save password from being displayed
- Disables the Internet Connection Wizard
- Prevents any changes to Temporary Internet Files
- Disables the Reset web Setting button

Appendix 3 - Troubleshooting Connection Problems

Overview

This appendix will help you diagnose connection problems between AB Tutor and the remote Student machines running the AB Client program. Most connection problems are down to your internal network setups. (e.g. firewalls, routers, switches or DNS/DHCP configurations) Below are some common problems to do with connections between the AB Tutor program and remote clients and what to check for to try to solve them. Also, there is a section below on how to test for connectivity issues and ways to resolve them on your networks.

Contents

Common Problems

Error messages

Methods of Testing Connectivity

Checking for problems with AB Tutor

Common Problems

Discovery doesn't find all my computers.

When AB Tutor performs a full Scan to find remote machines, it broadcasts a simple and small UDP message on your network. This message is then picked up by any running remote client programs and they then send back a reply saying "yes - I am here and this is my IP address and computer name". AB Tutor will then add this computer name to the list ready for you to connect directly to it.

If a machine does not appear in the list then check the following:

- The remote machine is turned on and not in Sleep or Hibernate mode
- The remote machine has a copy of the ABClient program installed and the service is running (see **Control Panel** - **Administrative Tools** - **Services** and find a service named **AB Client Manager**)
- If the Windows firewall is enabled, make sure the ABClient.exe program has been added as an exception. (This should be done by default by the ABTCSETUP7.MSI Windows installer)

- If using a third-party firewall (e.g. AVG or Symantec), make sure the ABClient.exe program has been added as an exception.
- AB Tutor uses UDP port 5151/5152 to broadcast and TCP port 5151/5152 to communicate directly, make sure your switches, routers or hardware firewalls do not block access through this port.

It is possible that your network hardware is blocking broadcast packets. To get round this, add the IP address range your clients use to the list in **Tools** - **Settings** - **Network**

Please see the section on <u>TELNET tests</u> to verify if you have a valid connection to the remote machines.

I can't find computers on a different subnet.

By default, AB Tutor will broadcast a message only within the local subnet. If you are not able to find machine due to them being on other subnets, then you will need to add the additional subnet ranges in **Tools** - **Settings** - **Network** or connect via Groups:

- Launch AB Tutor and select **Groups** and **Manage Groups**
- Create a new Group with an appropriate name.
- Add all the Computer names to which you want to connect, to this Group.

If you have Active Directory, you can add the computers quickly by selecting the **Active Directory** tab and browsing for the group/groups containing the computer names, multiple select them and press the **Add to Member** button

You can also export your current set of Groups/computers to file (Press the **Export** button). Then locate this file and manually build the groups by editing it with a simple text editor. The file is in XML format and can be interpreted very easily. Once you have manually added all the computers, press the **Import** button to reload the groups from this file.

If you want to protect this group so only you as an administrator will see it, then click on the **Security** tab, right click the mouse in the **Allow access** box and select **Add username**. Then enter your Windows login username to this list.

Unable to connect to host: The attempt to connect timed out without establishing a connection (10060)

Common causes of this error are:

- A firewall is blocking the connection to/from the remote machine on port 5151. Check your Windows firewall on both the Tutor and remote machine.
- The IP address of the machine you are connecting to is invalid
- The computer name you are connecting to has a different IP address registered on the Tutor machine. This can occur when your DHCP server allocates a new dynamic IP address to a computer name but your DNS server has not been told about it. So, then your Tutor machine asks the DNS server for the IP address assigned to the remote computer name, then the wrong IP will be returned. See the section below on diagnosing this problem.

I can scan and find a computer, but when I connect I get a connection failed error

Common causes of this error are:

- A firewall is blocking the connection to/from the remote machine on TCP port 5151 but UDP port 5151 is ok. Check your Windows firewall on both the Tutor and remote machine. Also check the firewall setting in your third-party firewall software (e.g. AVG or Symantec)
- An internal problem has occurred with the ABClient program. See the section on checking for errors in the ABClient program below

Unable to resolve host name: The requested name is valid. But no data of the requested type was found (11004)

Common causes of this error are:

- The computer name specified in the Group is invalid or does not exist
- Check the computer name is typed correctly in the Group
- Check the name exists in your DNS / DHCP server

Try the [PING test](#) to see if your network recognizes the machine name and returns a valid IP address

I seem to be connecting to computers in a different classroom

This will only occur if you are selecting a Group of computers and connect to them but when you view the remote machine it show a screen from a computer in a completely different part of the school. Another symptom is that you suddenly find a computer saying **invalid connection password**.

- This is almost always a problem with your DNS / DHCP server not synchronizing properly. See **Check DNS / DHCP problems**.
- If you get an invalid connection password, then what could be happening is that the IP address returned by your DNS server for the computer you are trying to connect to actually belongs in a different classroom or location when a different connection password has been applied. Again see **Check DNS / DHCP problems**.

I can connect to a machine from a Discovery Scan, but not from a group

This is almost certainly due to a problem with your DNS server. When a Discovery scan is run, the tutor machine sends a broadcast message out to its local subnet (and any additional addresses specified). Any client which receives this message will respond and the tutor then connects to them by IP address.
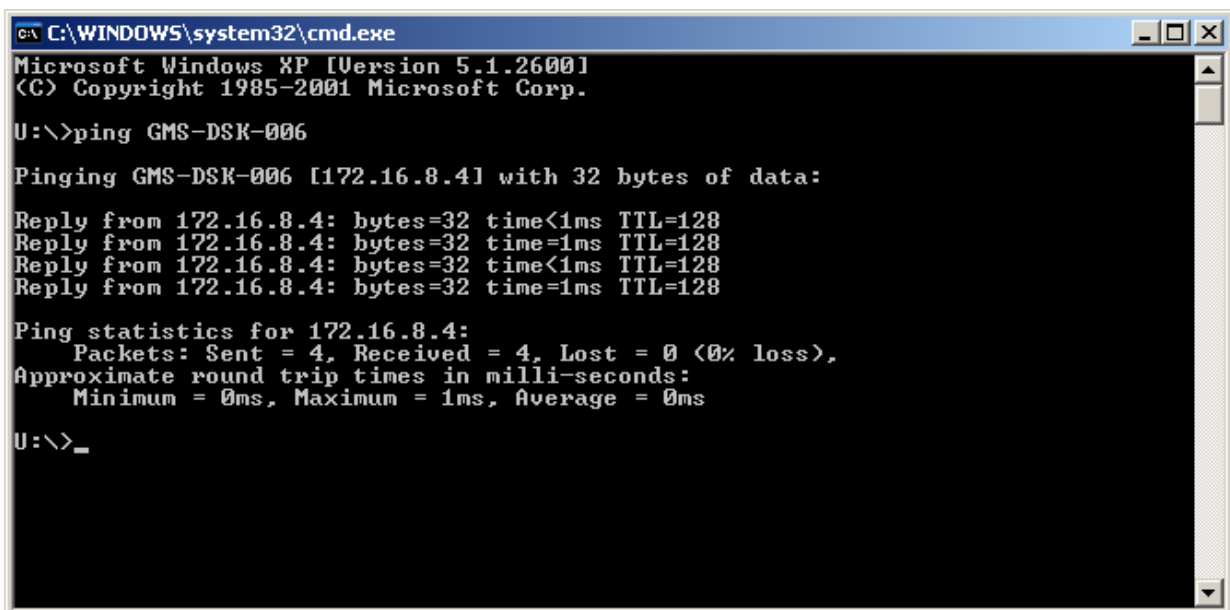
When you connect to a group, the tutor tries to connect to each computer in the group individually. To find them, it looks up their name with your DNS server to get the IP address and then connects to that IP. To check this, please try the DNS/DHCP test.

Methods of Testing Connectivity

Simple PING test

This test will simply check that you have a network connection to the remote machine (i.e. it's turned on and is connected to the network)

- Launch the Windows command prompt ('Start' - 'Run' - enter 'cmd.exe' and press OK)
- Enter: **ping <computer name>** and press ENTER (where <computer name> is the actual hostname - in our example GMS-DSK-006 - of the remote computer)

```
C:\WINDOWS\system32\cmd.exe                                    _ □ X
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

U:\>ping GMS-DSK-006

Pinging GMS-DSK-006 [172.16.8.4] with 32 bytes of data:

Reply from 172.16.8.4: bytes=32 time<1ms TTL=128
Reply from 172.16.8.4: bytes=32 time=1ms TTL=128
Reply from 172.16.8.4: bytes=32 time<1ms TTL=128
Reply from 172.16.8.4: bytes=32 time=1ms TTL=128

Ping statistics for 172.16.8.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

U:\>_
```

- If you get a reply saying the **Destination host unreachable** then that machine may be switched off or not connected to the network, or there may be a firewall running on it which is blocking ping. Note that by default, the Windows Firewall blocks ping.
- If you get a reply saying **Ping request could not find <computer name>. Please check the name and try again** then your network does not recognise that computer name. You should check the spelling of the name or that the computer has been correctly registered on your DNS and DHCP server.

More comprehensive test using TELNET

TELNET is a connection utility that comes with Windows. On Windows Vista or Windows 7 machines this utility may need to be activated.

To enable telnet on Windows Vista/Windows 7

- Open the Windows Control Panel.
- Then go into Programs and Features.
- Then in programs and features there should be a part that says **Turn windows features on or off**.
- Click **Turn windows features on or off** then on the list that appears simply check the box beside: **Telnet Client**.
- Click OK.
- You may need to reboot.

Using telnet

- Login on to the computer where AB Tutor is installed
- Launch the Windows command prompt (**Start** - **Run** - enter **cmd.exe** and press OK)
- Enter: telnet <computer name> 5151 and press ENTER (where <computer name> is the actual name or IP address of the remote computer)

  If everything is working fine, then you will see the following reply:
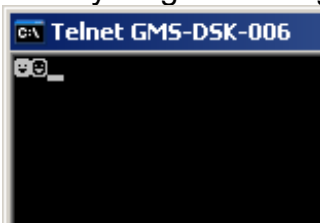
- Press the RETURN key 9 or 10 times until your get the **Connection to host lost** message.

If you get the following reply, then this shows that there is a problem connecting to this machine on TCP port 5151:

Check the following:

- The remote machine is turned on and not in Sleep or Hibernate mode
- The remote machine has a copy of the ABClient program installed and the service is running (see **Control Panel** - **Administrative Tools** - **Services** and find a service named **AB Client Manager**)
- If the Windows firewall is enabled, make sure the ABClient.exe program has been added as an exception. (This should be done by default by the ABTCSETUP7.MSI Windows installer)
- If using a third-party firewall (e.g. AVG or Symantec), make sure the ABClient.exe program has been added as an exception.
- Try entering the IP address of the remote machine to rule out problems with your DNS/DHCP server (Enter: telnet <IP Address> 5151 and press ENTER)

Checking DNS / DHCP problems

If you connect to a computer that you think is in one location but is actually connecting to a computer in a different class, or a client connects from a **Discovery** scan, but not from a **Group** then you have a DNS problem on your network.

To investigate this:

- Login on to the computer where the Tutor program is installed
- Launch the Windows command prompt (**Start** - **Run** - enter **cmd.exe** and press OK)
- Enter: **ping <computer name>** and press ENTER (where <computer name> is the actual

computer name of the remote computer)
- Note the IP address returned. The ping itself may fail, but this doesn't matter as long as you get an IP address.
- Now go to the actual client computer you have just pinged
- Logon (with admin level rights)
- Launch the Windows command prompt (**Start** - **Run** - enter **cmd.exe** and press OK)
- Enter: **ipconfig** and press ENTER

```
Ethernet adapter Local Area Connection:

        Connection-specific DNS Suffix  . :
        IP Address. . . . . . . . . . . . : 172.16.8.28
        Subnet Mask . . . . . . . . . . . : 255.255.252.0
        IP Address. . . . . . . . . . . . : fe80::a00:27ff:fe4b:74c8%5
        Default Gateway . . . . . . . . . : 172.16.11.254
```

- Note the IP address returned (usually under **IP Address** or **IPv4 Address** for your Local Area Connection)
- If the IP address from the Tutor machine and this IP address are different, then you have a problem with the DNS server not being updated properly by your DHCP server.

You may be able to solve this by:

- Go back to the Tutor machine and open up the Command Prompt Window
- Type: **ipconfig /flushdns** and press ENTER
- Then type: **ping <computer name>** and see if the IP address returns the correct one found on the actual remote machine.

If the IP addresses are still different, then you need to refer to your DNS/DHCP server to get then to re-sync.

Check no other programs are using ports 5151/5152

It has been known that other software providers have opted to use ports 5151 for their own application. To check for this:

- Login on to the remote computer to which you are having problems connecting
- Launch the Windows command prompt (**Start** - **Run** - enter **cmd.exe** and press OK)
  - Note: On Windows Vista or Windows 7, you must run the cmd.exe program with elevated privileges. (Run as Administrator)
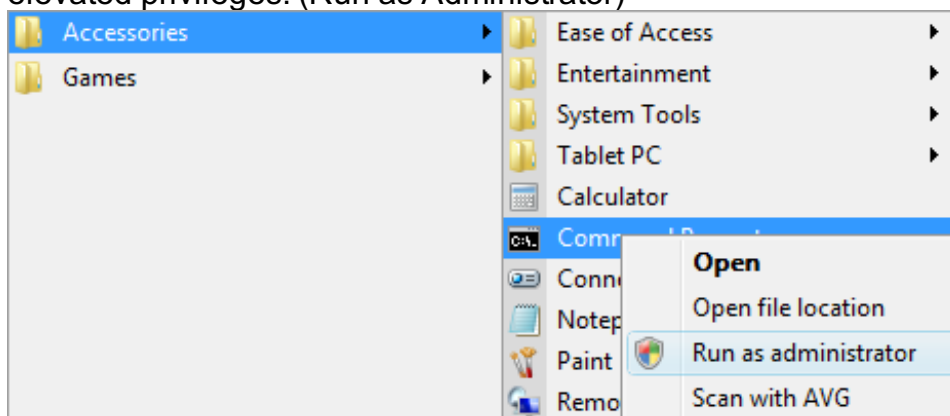
- Enter: **netstat -a -b** and press ENTER
- Analyse the output and look for any application that uses TCP or UDP ports 5151

You should only see 2 entries:

TCP 0.0.0.0:5151 LISTENING [ABClient.exe]
UDP 0.0.0.0:5151   [ABClient.exe]

If you find another application using ports 5151, please report it to AB Consulting.

Check for Errors in the ABClient program

If the ABClient program detects errors with the connections, it reports these messages to a log file. These log files are located in the ABClient data directory (Windows XP: **c:\Documents and Settings\All Users\Application Data\AB Tutor**, Windows Vista/7: **c:\ProgramData\AB Tutor**, MacOS: **/var/log/AB Tutor/**) This folder will contain a file called debug.log and on multi-user OSes, there will be other files called DebugUserModeX.log (where X is a number from 1 upwards and represents the ID number of the user's session)

The debug.log file is usually where you will see errors to do with connections. It's a simple text file and so can be edited with any text editor.

A typical error may be:

- 26 Aug 2010, 15:53:12, [4204], TcpListener on port 5151 failed (Unable to bind listening socket: Only one usage of each socket address (protocol/network address/port) is normally permitted. (10048))

This indicates that 2 programs on the machine are trying to listen on port 5151 for a connection, but only 1 is allowed. Maybe another program is using the port or maybe the ABClient program has been started incorrectly and 2 copies are running!

If in doubt, zip and e-mail this debug.log file to support@abtutor.com with a description of your problem so we can check the file for errors.

Check the Windows Event log for errors

Windows logs various system events that can also help locate problems. To launch the Windows Event Viewer:

- Select **Start** - **Run** - enter **eventvwr.exe** and press OK
- Click on **System** in the left hand tree view
- Right click on System and either select **Find** (or **View** then **Find** on XP)
- Enter **AB Client** in the **Find What** (or **Description** on XP)
- Keep clicking **Find next** until you find something other than information

Note: If you see the following error on Windows Vista/7/2008 then this can be ignored:
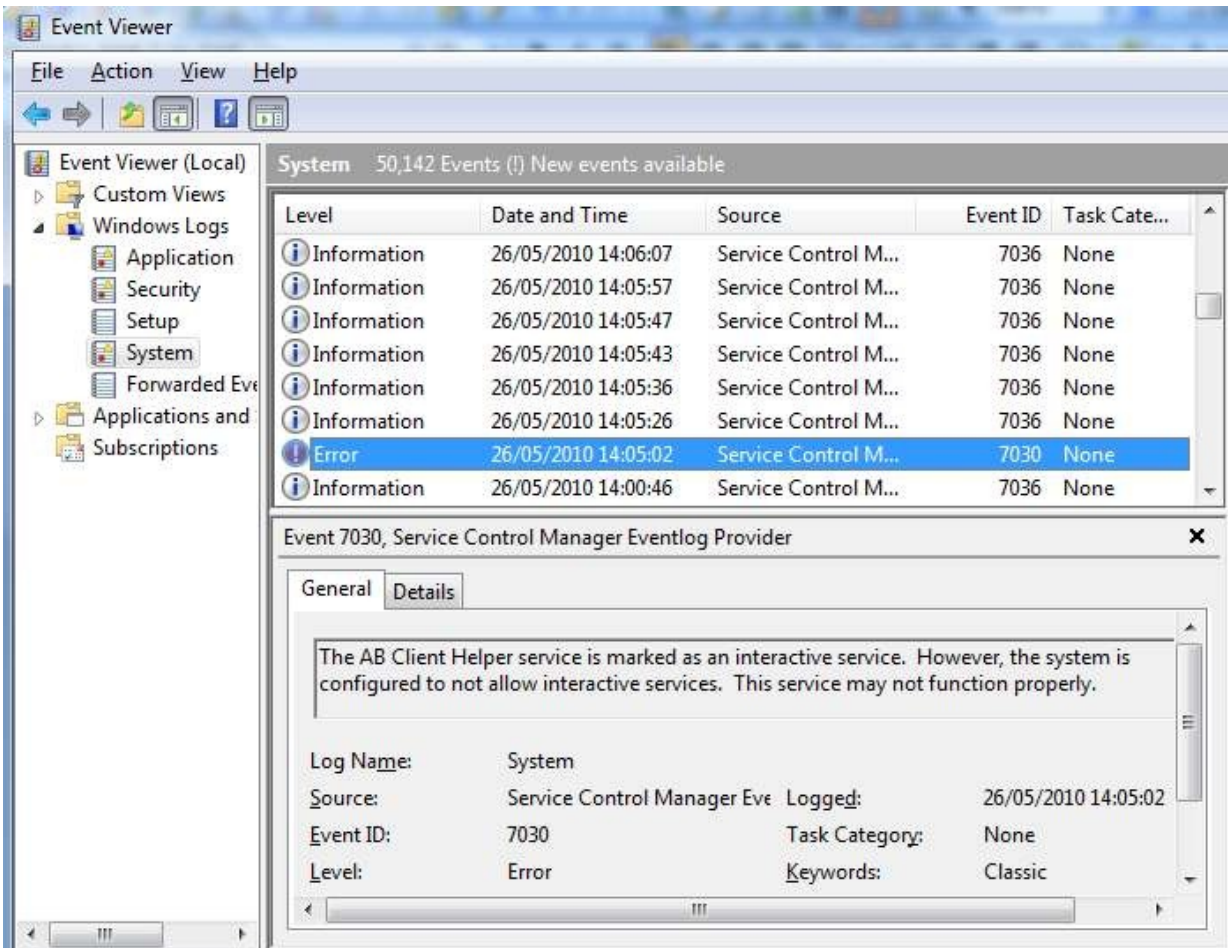
The following event log shows that the ABClient program has terminated unexpectedly. The debug.log file may give glues as to what has happened here.