

NeSA Technical FAQs

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Technical Answers

Installation/Update Answers

1. **What do I need to do to set up my school labs to participate in computerized testing?**
 - There are two ways to configure your computer labs to participate in computerized testing:
 - Case 1, [figure 1](#): CAL testing online. This is the easiest way to configure your lab to be ready for the testing. In this case all you need to do is install the CAL test delivery software on each of the computers to be used for testing. The rest of the FAQs will give you more information on the system requirements and how to configure the software to work properly.
 - Case 2, [figure 2](#): CAL testing with the Local Caching Software (LCS). In this scenario you will need to install the CAL test delivery software on each computer to be used for testing (as indicated in Case 1), and you will also need to install the LCS software on one of your school computers. In this scenario, each CAL end client will need to be configured to work with the LCS. See section on the Local Caching Software below to learn how to configure your lab to use the LCS.

2. **What are the system requirements to install the CAL software?**
 - Refer to the [System Requirements](#).

3. **How do I install the CAL software on my computers?**
 - Go to the [Download Center](#), download the CAL software, and follow the installation instructions.

4. **Do I need administrative privileges on my computers to install the CAL software?**
 - Yes, to install the CAL software on computers that support multiple users, you need to login to your computers as a user that has privileges to install new software.

5. **Where is the default location of the installed CAL software?**
 - For Windows the default location of the installation is:
C:\ProgramFiles\nesa\.
 - For Mac, the default location of the installation is:
/Applications/nesa/.

6. **Where is the default location of the shortcuts for the CAL test delivery engine?**

- For Windows the default location of shortcuts is Start->Programs->NeSA. Another shortcut is also placed on the desktop. For Mac users a shortcut to the CAL test delivery engine is placed on the desktop. A shortcut will also be placed within the Applications folder in the users home directory.

7. **Once installed, how do I run the CAL software?**

- In Windows, click the NeSA shortcut on your desktop or use the NeSA shortcut on Start->Programs->NeSA on the start menu.
- On Mac systems, click on the NeSA shortcut on the desktop or on the one available within the Applications folder in the users Home directory.
- **Note that technical staff may decide to create shortcuts in different locations, in which case you need to instruct your students where to find the shortcuts in order to launch the CAL test delivery engine.**

8. **Does CAL support proxy servers and proxy server authentication?**

- Yes, the use of proxy servers and proxy server authentication is supported by the CAL software. CAL tries to automatically detect and use the proxy setting configured in your computer. In Windows systems, the proxy settings are retrieved from the Windows registry:
HKEY.CURRENT_USER\\Software
\\Microsoft\\Windows\\CurrentVersion\\Internet Settings\\ProxyEnable and
ProxyServer. If these values are not set, you will need to manually set the proxy setting using the Preferences program. In Mac OS X systems, the proxy settings are retrieved from the Network manager. In most cases you will not need to worry about proxy settings, but if you need to manually edit them, follow these steps:
 - 1) Locate and open the Preferences program.
 - 2) In the Proxy Tab check "HTTP Proxy" box and fill in the http proxy host and proxy port. (Contact your system administrators to obtain this information.)
 - 3) If you use a different proxy server for SSL communication, select the "Secure Proxy (HTTPS)" box and fill in the corresponding proxy host and proxy port. (Contact your system administrators to obtain this information.)
 - 4) Click "Apply" – then OK.

9. **Does CAL support secure Internet communication?**

- Yes, CAL supports secure Internet communication using SSL ([Secure Sockets Layer](#)), a cryptographic data transmission protocol. By default the CAL application is configured to use SSL based communication. If you like to re-enable or disable using SSL communication, follow these steps.
 - 1) Locate and open the Preferences program.
 - 2) Select the "Secure Connection" tab.

- 3) Check or uncheck the "Enable Secure Connection" check box to enable or disable the option.
- 4) Click "Apply" – then OK.
- 5) Also make sure that your school network allows outgoing SSL communication on Port 443, and that your proxy server (if used) supports SSL communication.

10. **What port needs to be open for the CAL software to work properly?**

- You need to allow outgoing communication on port 80, and if you set up CAL to use SSL communication you will also need to allow outgoing communication on port 443.

11. **Why does the new update of the CAL software fail after being deployed when the CAL test delivery engine is opened?**

- All Systems
You may see this problem if the current user of the computer does not have privileges to update the software. By default, the CAL testing software sets file permissions to allow all users of the system to automatically get software updates. If those permissions were modified, automatic updates will fail and you will need to manually deploy any updates.
- Mac OS X 10.5.8
CAL has an automatic update feature that allows the testing software to automatically receive updates. Starting on December 3, 2009, Mac 10.5.8 systems have an option to get a "Java for Mac OS X 10.5 Update 6". If this update is installed on your computers, the use of Java 1.4 will be disabled. Since Java 1.4 is required for the CAL automatic update feature to work, your computers will not be able to get the next CAL update automatically. One solution to this problem is to manually enable the use of Java 1.4 again. To do that you can follow these steps:
 - Using Finder go to Applications/Utilities
 - Open Java Preferences
 - Under the 'General' tab there would be entries for 'J2SE 1.4.2' under both Java Applet Plug-in and Java Applications
 - Enable the check boxes corresponding to 'J2SE 1.4.2' under both these categories
 - Close the Preferences and start the CAL Application
 - Now the application will make use of Java 1.4.2 and should be able to get the updates
- Mac OS X 10.6
These systems do not support Java 1.4 and will not be able to get automatic updates at this time.

12. **How can I get the updates of the CAL software?**

- CAL has an automatic update feature that checks for updates every time CAL is launched. If an update is available, it will be automatically downloaded and deployed onto your computers. However, if your computers support multiple users (Windows NT, 2000, XP, 2003 or later and Mac OS X), in order for the updates to be successfully deployed, the systems must be logged in by a user with privileges to write to the folder where the CAL software was installed. The default installation of CAL sets permissions so that any user of the computer could automatically download and deploy available updates by simply running the CAL test delivery engine.
- It is important to note that these default permission settings will also grant permissions to any user to delete or modify the CAL software. If you decide that this is not a good decision in your environment, you can manually restrict the permissions of the CAL installation folder. In order to get CAL updates when they become available, you will need to have a user with administrative privileges run the CAL test delivery engine. There could also be systems or situations in which the default permission settings fail and users without administrative privileges will not be able to get the available updates. In this case you have three options:
 - Manually change permissions to the CAL installation folder so that all users have permissions to download and deploy the available updates.
 - When updates are available, have a user with administrative privileges launch the CAL test delivery engine so updates are automatically deployed.
 - Windows users can use Windows Installer-based patches to automatically deploy updates using Software Installation and Active Directory Group Policy.

13. How do I use Windows Installer-based patches to deploy CAL updates using Software Installation and Active Directory Group Policy?

- You have the option of using patches for Windows Installer technology to deploy the CAL updates. When new updates are made available, a Windows Installer Patch for the update will also be made available at the Download Center. You will need to download and run the patch on your computer for the update to be deployed. Refer to the following link to learn more about [Windows Installer](#).

14. What are the URL(s) for the servers that the CAL software connects to?

- <http://nesa.caltesting.org>
- <https://nesa.caltesting.org>
- <http://nesa3.caltesting.org>
- <https://nesa3.caltesting.org>
- <http://updates.caltesting.org>

15. Does the auto update feature require the user to accept or is this done in the background?

- The user does not have to accept the update. There will simply be a message indicating that the update is being installed.

16. **Is there an alternative way to test the software that does not require student interaction?**

- Yes, the software can be tested by taking a Practice Test.

17. **Will Camino work as a browser for the CAL web-based components?**

- Yes, you can use the Camino browser to access the website and student tutorials.

18. **Is there a way to push the CAL software settings to all PCs in a lab?**

- Yes, when you change any settings of the CAL software using the Preferences program all the settings are saved in a system.properties file within the conf folder in the CAL software installation directory. You can then push this system.properties file to all other computers in your lab.

Preferences Program Answers

1. What is the Preferences program?

- The Preferences program is an application included in the installation of the CAL software. This program can be used by technical staff in your school to configure features such as the Speech Feature, Local Caching Software, Automatic Updates, Proxy Servers, secure Internet connections, i.e. [Transport Layer Security, a.k.a. SSL \(Secure Sockets Layer\)](#), and troubleshooting problems with installation and testing.

2. Where do I find and how do I run the Preferences program?

- On Windows systems go to Start->Programs->NeSA->Preferences. On Mac systems, go to the Preferences program located in the folder Applications folder within the users home directory.

3. What are the "Troubleshoot" and "Log File" panels in the Preferences program?

- The Troubleshoot panel helps you find problems with the CAL software. The following are the tests available and possible actions to take in the event of test failure:
 1. Writing to Local File System: The CAL software writes log messages to a file in the local file system: user_home\cal\cal.log. This test confirms whether there are sufficient permissions for writing to this file. The failure of this test is not critical since CAL will still run, but messages will not be logged into the log file.
 2. DNS Tests:
 - Domain Name Lookup: This tests if there are any problems with CAL software locating your DNS server.
 - CAL Domain Name Lookup: This tests if your computer can reach the CAL Data Center servers by their domain names.
 - The passing of the above tests is critical for the correct operation of the CAL software. A failure indicates that there is a problem with the DNS servers at the schools and/or at the CAL Data Center.
 3. Connectivity Tests:
 - General Internet Connectivity: This tests if the schools are able to connect to the Internet, which is essential for connecting to the CAL Data Center.
 - CAL Internet Connectivity: This tests if your computer is able to connect to the CAL Data Center.
 - The passing of the above tests is critical for the CAL software to operate properly.
- Log File Panel
 - The Log Panel displays the contents of the CAL log file (user_home\cal\cal.log). This file can be useful when troubleshooting the software. The panel displays the last 500 lines of the log file at a maximum.

Local Caching Software (LCS) Answers

1. What is the Local Caching Software (LCS)?

- The Local Caching Software (LCS) is a system that increases the testing capacity of schools by optimizing the use of the external Internet bandwidth available to the school during testing.
- To start using the Local Caching Software you must first install the LCS software in a local school server and configure each of the CAL end clients to use the caching server. Learn more and download the [LCS](#).

2. What are the benefits of using the LCS?

- Enables efficient utilization of local school bandwidth by caching test data locally.
- Allows students to continue testing by caching their responses locally in case of any connectivity issues to the CAL Data Center.
- Click this link for information on whether the LCS will [benefit your school](#).

3. How do I know if I need to install the LCS?

- For many schools, the simple set up without the LCS works fine. However, the LCS is recommended for schools that have limited bandwidth and need to test a large number of students simultaneously. CAL's experience elsewhere is that schools with a T1 connection should be able to test up to 150 students simultaneously without an LCS.
- If you are not sure if you need to install the LCS, we recommend conducting a simulated test using the Practice Tests, prior to the actual testing window. If you experience long delays while the tests are loading, you can then install the LCS and configure the end client computers to work with the LCS.

4. What happens to the test data and student responses in the event of a crash of the computer that is running the LCS?

- The LCS stores the test data and student responses in a database on the hard disk to prevent any data loss in the event of a computer crash or failure. If you want to move the LCS to a different server, follow the following instructions:
 1. Make sure that there are no students taking the tests using LCS.
 2. Stop the LCS on your old computer.
 3. Install the LCS version on the new computer.
 4. The test data and student responses are stored in the **data** folder within the LCS installation folder. Copy all the contents from the data folder on your old computer into the data folder on your new computer.
 5. On your old computer all the configuration files are stored in the **conf** folder within the LCS installation folder. Copy all the contents from the conf folder on your old computer into the conf folder on your new computer.

6. Reconfigure the CAL testing engine to use the LCS installed on the new computer.

5. **What version of Java do I need to install the LCS?**

- The version of Java required is 1.4, but you do not need to install any version of Java on your system as Java 1.4 is bundled with the LCS installer.

6. **Can I operate the LCS from a virtual server?**

- Yes, the LCS can be operated from a virtual server.

7. **In the past I have used the testing system without using the LCS and have had no problems? Is the LCS required?**

- The LCS is an optional component and you are not required to install the LCS. If you encounter any bandwidth issues or delays when your students are taking tests then we highly recommend that you install and use the LCS.

Error Answers

1. **What should I do if error messages display while students are testing?**

- Possible error messages:
 - "Unable to connect to the central server. Please check your Internet connection. Contact your teacher or test administrator."
 - "Your Internet connection has been lost. Contact your teacher or test administrator to reactivate your password for this part of the test."
 - "A system error has occurred. Contact your teacher or test administrator."
 - "A system error has occurred. Contact your teacher or test administrator to reactivate your password for this part of the test."
- Check if you have a proper Internet connection in the computers with the problem. If your connection is good, open your browser and test the communication to the [CAL Data Center](#). If you get a "Success!" message, then try to run CAL again and take a Practice Test. If you still get the same results, open the CAL Preferences program to check if the CAL proxy settings are set correctly. You can also use the Troubleshoot tab in the Preferences program to assist you with troubleshooting the problem.

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