

# PISA FT 2012: CBA SYSTEMS DIAGNOSTIC MANUAL VERSION 1.0

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**Note to NPM**

This is the Field Trial source version of the Systems Diagnostic Manual for schools participating in the Computer Based Assessment (CBA). The Systems Diagnostic is provided on a USB drive. Please ensure that all bold text in angled brackets is adapted to reflect national information and that all “Note to NPMs” boxes are deleted before sending to print. This manual will NOT require international verification.

The instructions assume that the CBA School Coordinator (or School Associate) or someone at the school will run the Systems Diagnostic on all available computers.

*Please remove this box when adaptation of this manual is complete.*

## Introduction

1. Up to <ETCS> students in your school will participate in the Computer Based Assessment (CBA) as part of the PISA assessment. It is important to establish whether the computers students will use for the test have the required capabilities to run the CBA test successfully.
2. This manual provides instructions for the completion of a Systems Diagnostic (SD) which will test computer capabilities for running the CBA test. The information gained from this diagnostic will then enable the completion of the CBA Systems Diagnostic test results forms so that the number of suitable computers available in one room can be determined. This information will need to be provided to <NC>.

## Running the Systems Diagnostic

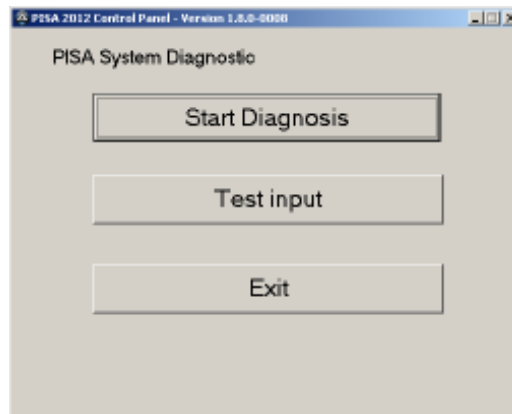
**Note to NPM**

The Systems Diagnostic is only available in English. You may decide to include the translations of the messages that appear throughout in your local language within this manual.

*Please remove this box when adaptation of this manual is complete.*

3. The CBA Systems Diagnostic (SD) runs from a single USB drive.
4. The user must have an account with administrative rights to run the SD. This is explained further below in the section ‘Reporting results’ (item d).
5. The operating system must be Windows XP, Windows Vista or Windows 7.
6. The SD provides a variety checks. As a minimum, the test input, basic check and virus scan of the USB MUST be completed. A virus scan of the local hard drive and an advanced check are also recommended but are not mandatory. Each test is described in this manual.
7. To run the SD, turn on the computer and close any applications running on the computer.
8. Insert the SD USB and open Windows Explorer. Locate and run the executable file in the root directory of the USB called ‘PISAMenu.exe’ (e.g. by double-click on the file).

9. The following control panel will appear:



10. Click on the 'Start Diagnosis' button and the following screen will appear:



11. The top section of the screen 'About the System' provides general information about the computer being tested.

- "OS" refers to the operating system.
- "Service Pack" is the latest installed service pack, if there is no service pack installed -- N/A -- is displayed.
- "User" is the user currently logged into the computer.
- "USB key size" displays the amount of free memory and total capacity of the USB drive.

- The buttons on the right of the screen are the three different diagnostic tests that can be implemented: the basic check, the virus scan, the advanced check and a button for exiting the diagnostic. Please note that in the home edition of Windows XP the 'Advanced Check' button will be disabled.

## Basic check

- Click on the 'Basic check' button on the right of the screen. This check may take a few seconds to run. Below is an example of what will appear when the basic check is complete.



14. The following table indicates each type of basic check, what it is checked, the associated requirement for the CBA test and the possible messages that will appear in the centre section of the screen above:

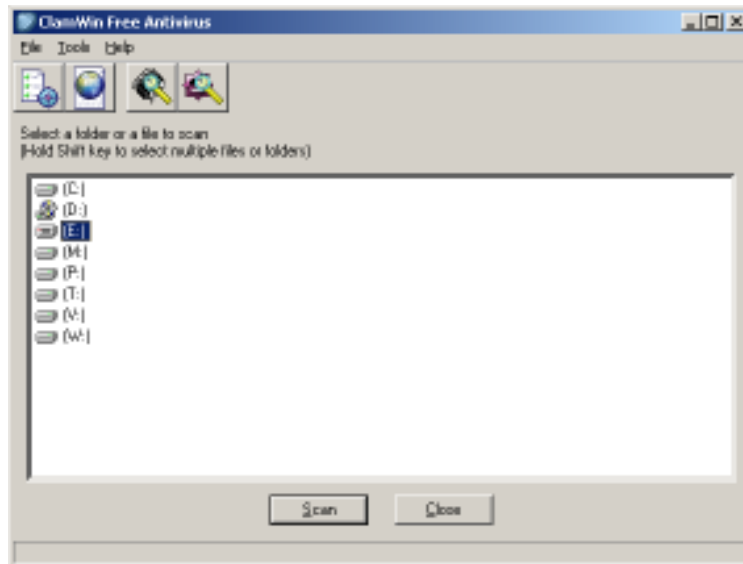
Label	What it tests	Requirement for CBA	Possible message
CPU	The speed of the CPU installed in MHz	Must be at least 1500Mhz	OK : CPU speed is "n" MHz OR Failed : CPU speed is "n" MHz
OS	The operating system	Must be Windows XP, Windows Vista or Windows 7	OK : Operating system is "one of Win XP, Win Vista, Win 7" OR Failed : Operating system is "system other than Win XP, Win Vista, Win 7"
System memory	The memory installed on the computer in MB	Required memory for Windows XP = 512 MB Required memory for Windows VISTA = 1024 MB Required memory for Windows 7 = 1024 MB	OK : System memory OR Failed : System memory (required "n" MB)
Screen resolution	The current screen resolution (width x height)	Minimal screen width = 1024 px Minimal screen height = 768 px	OK : Screen : Width x Height OR Failed : Screen : Width x Height
Account with admin rights	Whether the current user is logged in as an administrator	Must be logged in as an administrator	OK : Account with admin rights OR Failed : Account with admin rights required
Skype running?	If Skype is running on the computer	The CBA assessment cannot run with Skype running	OK : Skype is not running OR Failed : Skype should not be running
System's DPI setting	The computer's current DPI setting	DPI setting must be 96 DPI (100%)	OK : DPI setting is 96 DPI OR Failed : DPI setting is "n" DPI
USB key data transfer rate	The USB key data transfer rate in MB/s	Required USB data transfer rate = 1 MB/s	OK : Speed "n" MB/s OR Failed : Speed "n" MB/s OR Can't run the test - in cases where the program could not detect the transfer rate

15. If all basic checks are highlighted in green and labelled 'OK', the computer is suitable for running the CBA assessment. If any appear in red, the computer may not be suitable.

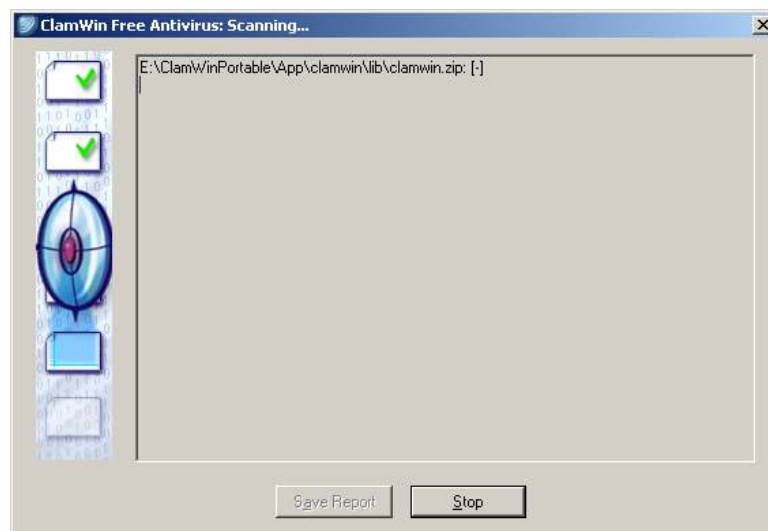
16. For each computer tested, please complete the test results form on page 13. Please refer to the section on Reporting Results for more information.

## Virus scan

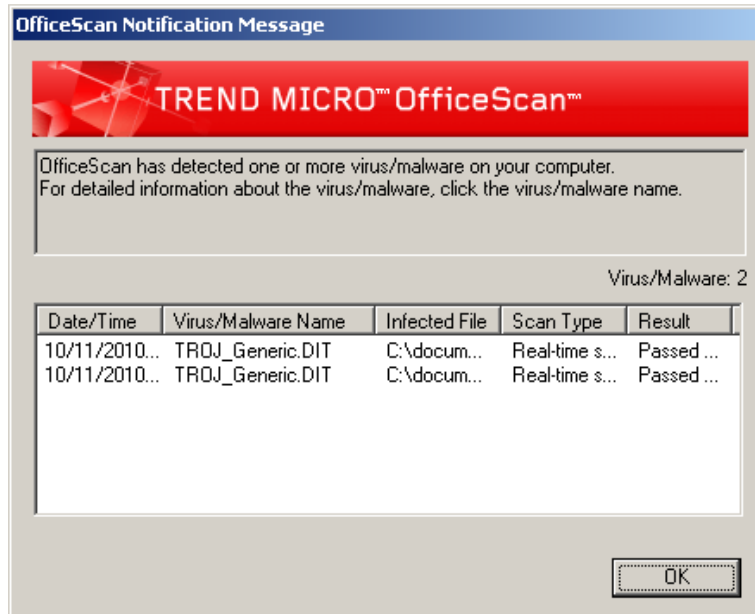
17. The virus scan can be used to check any drive on your computer. The scan must be completed on the USB drive and will take approximately 30 seconds.
18. It is recommended (but not mandatory) to also run the scan on the local hard drive. Please note that this may take between two and five hours for each computer.
19. To run the virus scan, click on the 'Virus Scan' button on the bottom right of the Systems Diagnostic check screen. All local and network drives will appear as available for scanning. The following screen shot is an example of what will appear when 8 drives (including USB) are available for scanning.



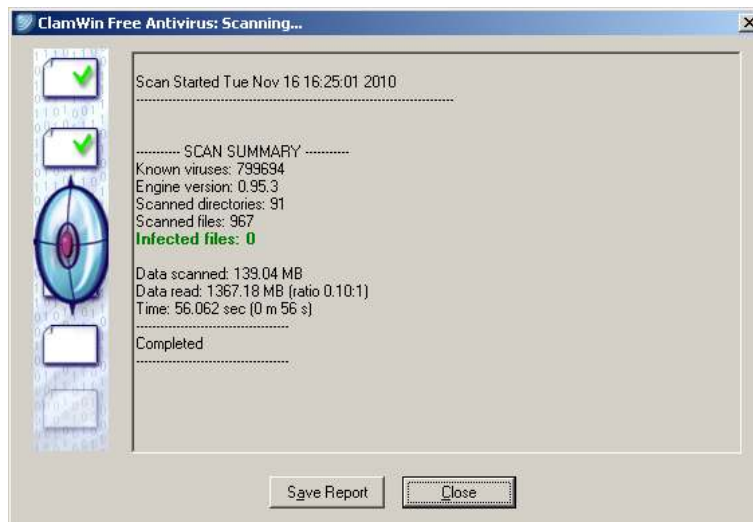
20. To scan the USB drive, ensure that the correct drive is selected, then click on the 'Scan' button at the bottom of the screen. The following screen will appear and may take approximately 30 seconds to run on the USB (or up to 5 hours for the local hard drive scan).



21. Please note that while the virus scan is running the computer's local antivirus software may detect the virus scan software being used for PISA (ClamWin Free Antivirus) as a virus. **This is normal and should be ignored.** Below is an example of the screen that appears when Trend Micro OfficeScan is the local antivirus software. Dialog screens and options will vary depending on the type of antivirus software installed locally.



22. In this example, the local virus scanner (Trend Micro Office Scan) has detected the Systems Diagnostic virus scanner (ClamWin Free Antivirus) as a virus. If this occurs click 'OK' and the virus scan will continue.
23. The following screen is an example of what will appear when the virus scan is complete.



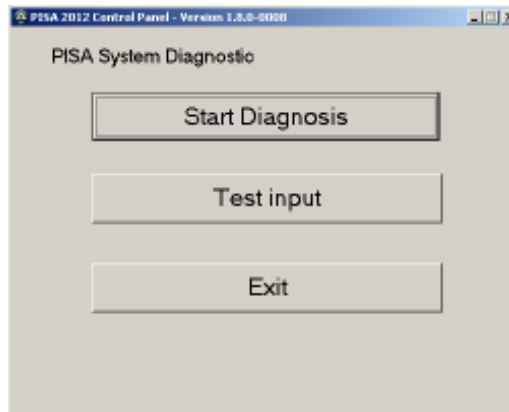
24. In this example the scan was successful and the computer is suitable for the CBA. It indicates no infected files were found.
25. If, however, the scan indicates that there are infected files, you will need to clean the USB (or local hard drive) with professional antivirus software or return the USB to <NC>. Until the virus scan reveals that there are no infected files on the USB drive, the USB should not be used to run the CBA.
26. Click on the 'Close' button to exit the virus scan.

## Advanced check – optional

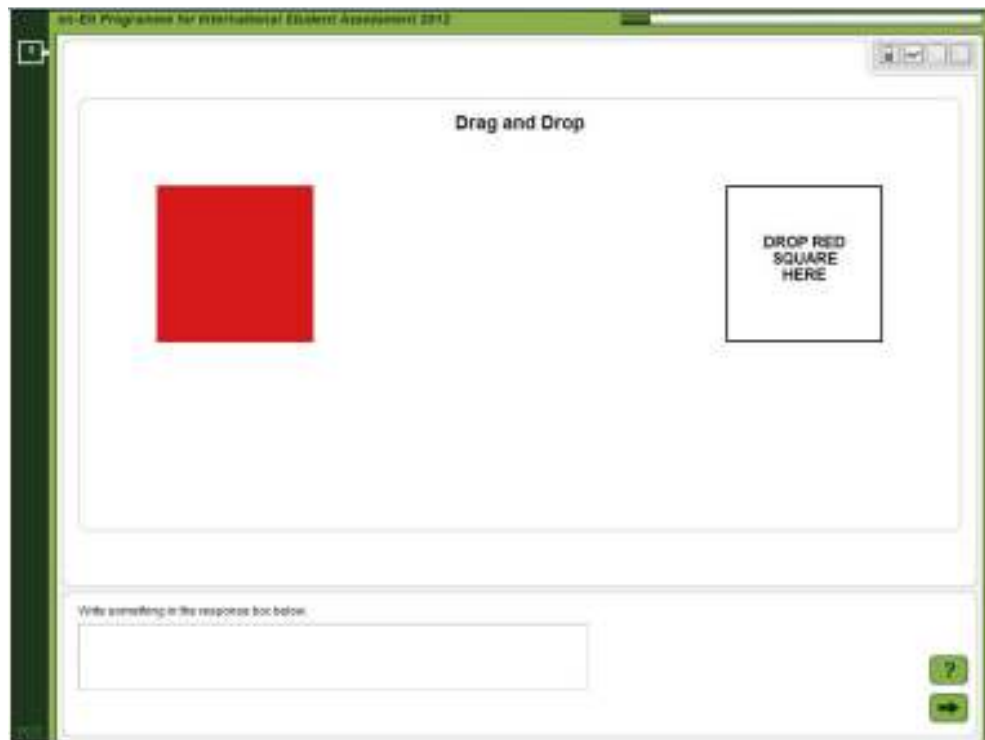
27. The advanced check is a more detailed scan of the memory of the computer. By selecting this option, a text file is written to the USB that contains information regarding the computer's memory. This may take a few minutes to complete. While the check is running, the cursor changes into an hourglass icon. It is not a requirement to run this check unless requested to do so by your <NC> who may then request some specific information from this text file.

## Test input

28. Click on the 'Exit' button and return to the control panel which has the 'Test input' button as indicated in the screen shot below.



29. Click on the 'Test input' button. An automatic virus scan of the memory will commence. This scan will take two or more minutes depending on the size of the computer's memory.
30. If the software indicates that a virus is detected a popup window will appear informing you of this and asking whether you would like to proceed with the CBA. You may choose to proceed but it is recommended to clean the computer with professional antivirus software first. This reduces the likelihood that a virus will be transferred to the USB.
31. Once the virus scan is complete, enter the password:  
123456789  
The following screen will appear:



32. If this page does not appear, press ALT TAB to return to the PISA 2012 Control Panel and click on the 'Exit' button. Eject the USB from the computer and start the process of running the 'Test input' check again. If the error continues to appear, re-start the computer before trying again.
33. This 'mock item' is designed to test if the functionality of the CBA will work on the computer. Please complete the following:
  1. Drag and drop the box as indicated and record whether this function works or not.
  2. Enter text into the text box and record whether this function works or not.
34. Once complete press ALT TAB to access the Pisa 2012 Control Panel, click on the 'Exit' button and remove the USB from the computer.

## Reporting results

35. For each computer tested, please complete the test results table below. Make photocopies as required.
36. Please then collate the information from all test results and determine how many computers are suitable in a single room for CBA testing. Then pass this information onto the <NC>.

<b>CBA SYSTEMS DIAGNOSTIC TEST RESULTS FORM</b>			
<b>BASIC CHECKS</b>			
<b>CPU</b>	<input type="checkbox"/> OK	<input type="checkbox"/> FAILED	
<b>OS</b>	<input type="checkbox"/> OK	<input type="checkbox"/> FAILED	
<b>System memory</b>	<input type="checkbox"/> OK	<input type="checkbox"/> FAILED	
<b>Screen resolution</b>	<input type="checkbox"/> OK	<input type="checkbox"/> FAILED	
<b>Account with admin rights</b>	<input type="checkbox"/> OK	<input type="checkbox"/> FAILED	
<b>Skype running?</b>	<input type="checkbox"/> OK	<input type="checkbox"/> FAILED	
<b>System's DPI setting</b>	<input type="checkbox"/> OK	<input type="checkbox"/> FAILED	
<b>USB key data transfer rate</b>	<input type="checkbox"/> OK	<input type="checkbox"/> FAILED	
<b>VIRUS SCAN</b>			
USB Drive	<input type="checkbox"/> OK	<input type="checkbox"/> FAILED but corrected	<input type="checkbox"/> FAILED
Local Hard Drive	<input type="checkbox"/> OK	<input type="checkbox"/> FAILED but corrected	<input type="checkbox"/> FAILED <input type="checkbox"/> Not Applied
<b>ADVANCED CHECK</b>	<input type="checkbox"/> Not Applied	<input type="checkbox"/> OK	<input type="checkbox"/> FAILED
<b>TEST INPUT</b>			
<b>Drag and drop</b>	<input type="checkbox"/> OK	<input type="checkbox"/> FAILED	
<b>Enter text</b>	<input type="checkbox"/> OK	<input type="checkbox"/> FAILED	
<b>COMMENTS</b>			
<b>IS THE COMPUTER SUITABLE?*</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO	

### \* Instructions for establishing if the computer is suitable

Use the information in the summary section of the test results to establish if the computer is suitable for the CBA test:

- If all checks are OK (or 'Not Applied') then the computer is suitable for the CBA test.
- If 'CPU', 'OS' or 'System memory' failed the test, the computer is not suitable for the CBA test.
- If the 'screen resolution' test fails, you may attempt to alter the screen resolution. To do this, go to 'Settings' and then 'Control Panel' from the 'Start' menu. Open 'Display'

and go to the ‘Settings’ tab. Ensure that the resolution is set to *at least* 1024 x 768 pixels. If this level of resolution is not available the computer is not suitable for running the CBA test. If this level of resolution is available, apply the new settings and run the basic check again. If the ‘screen resolution’ test is ok, the computer is suitable with this setting; if it fails the computer is not suitable for the CBA test.

- d. If the ‘account with admin rights’ test fails it may be possible to change the administration settings of the computer. To do this, go to ‘Settings’ and then ‘Control Panel’ from the ‘Start’ menu. Open ‘User Accounts’ and change the user group membership to ‘Administrator’. Note that this setting should be altered using the main administrator account for the computer. After adjusting the administrator settings on the computer, run the basic check again. If the ‘account with admin rights’ test is ok, the computer is suitable with this setting, if it fails the CBA test can not be launched. For more detailed instructions on adjusting the administration rights on the computer, visit one of the following websites depending on your operating system.

Operating system	Creating user accounts	Creating user account group membership
Windows XP	<a href="http://www.microsoft.com/windowsxp/using/setup/winxp/accounts.mspx">http://www.microsoft.com/windowsxp/using/setup/winxp/accounts.mspx</a>	<a href="http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en-us/usercpl_change_group.mspx?mfr=true">http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en-us/usercpl_change_group.mspx?mfr=true</a>
Windows Vista	<a href="http://windows.microsoft.com/en-US/windows-vista/Create-a-user-account">http://windows.microsoft.com/en-US/windows-vista/Create-a-user-account</a>	<a href="http://windows.microsoft.com/en-US/windows-vista/Change-a-users-account-type">http://windows.microsoft.com/en-US/windows-vista/Change-a-users-account-type</a>
Windows 7	<a href="http://windows.microsoft.com/en-us/Windows7/Create-a-user-account">http://windows.microsoft.com/en-us/Windows7/Create-a-user-account</a>	<a href="http://windows.microsoft.com/en-us/windows7/Change-a-users-account-type">http://windows.microsoft.com/en-us/windows7/Change-a-users-account-type</a>

- e. If the ‘Skype’ test fails, ensure that Skype is shut down on the local computer and run the basic check again. If the ‘Skype’ test still fails the computer is not suitable for running the CBA test.
- f. If the ‘System’s DPI setting’ fails, it is possible to adjust these settings. The system’s DPI must be set to 96 DPI (100%). For instructions on adjusting the system’s DPI setting visit one of the following websites depending on your operating system.

Operating system	Website for instructions for altering the system’s DPI settings
Windows XP	<a href="http://www.microsoft.com/windowsxp/using/setup/personalize/look.mspx">http://www.microsoft.com/windowsxp/using/setup/personalize/look.mspx</a>
Windows Vista	<a href="http://windows.microsoft.com/en-US/windows-vista/Make-the-text-on-your-screen-larger-or-smaller">http://windows.microsoft.com/en-US/windows-vista/Make-the-text-on-your-screen-larger-or-smaller</a>
Windows 7	<a href="http://windows.microsoft.com/en-us/windows7/Make-the-text-on-your-screen-larger-or-smaller">http://windows.microsoft.com/en-us/windows7/Make-the-text-on-your-screen-larger-or-smaller</a>

After making this adjustment, run the basic check again. If the ‘System’s DPI setting’ is ok, the computer is suitable however if the test still fails, the computer is not suitable for the CBA test.

- g. If the ‘USB Key data transfer rate’ test fails, the USB is not suitable for running the test and you will need to contact your <NC>. A USB that has a data transfer rate of 1 MB/s must be used.

## Exit

37. Once the basic check, virus scan, advanced check and mock item check have been completed, please exit the SD by clicking on the 'Exit' button on the main screen and remove the USB from the computer.

## Return of materials

### Note to NPM

If you do not require the USB versions of the Systems Diagnostic to be returned, please delete this section.

*Please remove this box upon completion of this section.*

38. Once all computers have been tested using the Systems Diagnostic, please return the USBs to the **<national centre>**.