

National Assessment Governing Board

National Assessment of Educational Progress Judgmental Standard Setting (JSS)

Final Submitted: May 20, 2014

CAB Technical User Guide

Submitted to:
Munira Mwalimu
National Assessment Governing Board
800 North Capitol Street, NW, Suite 825
Washington, DC 20002-4233

This study was funded by the
National Assessment Governing Board
under Contract ED-NAG-10-C-0004.



Standard Setting Software Deployment June 27, 2014

Availability of Data – Open Data Policy

In accordance with the U.S. government's Open Government Directive, agencies are directed to share federal government data with the public, to increase transparency, participation, and collaboration (see <http://www.howto.gov/web-content/technology/sharing-government-data>). The Open Data Policy developed by the White House encourages making data available to the public, see <http://project-open-data.github.io/>. The U.S. Department of Education 2012 Open Government Plan can be found at <http://www.ed.gov/sites/default/files/opengov-plan-v20.pdf>.

Pursuant to this guidance, and in accordance with Federal Acquisition Regulations, the National Assessment Governing Board (Governing Board) is providing access to software and data prepared in support of the Governing Board's contract work on standard setting. This work was performed under the legislative authority of the Governing Board to set achievement levels, see <http://www.nagb.gov/naep/naep-law.html>. More information on the Governing Board's work is available at www.nagb.gov.

Background

The National Assessment Governing awarded two contracts in Fiscal Year 2010 to conduct standard setting work. Contract number ED-NAG-10-C-0003 was awarded to Measured Progress to develop achievement levels for the 2011 and 2013 National Assessment of Educational Progress (NAEP) writing assessments. Measured Progress developed a computerized process for conducting the achievement levels process.¹ The second contract, ED-NAG-10-C-0004, was awarded to WestEd to conduct Judgmental Standard Setting Studies (JSS) to identify the NAEP scores at the 12th grade representing the knowledge and skills in reading and mathematics needed to qualify for entry-level credit-bearing college courses and for job training programs in five selected occupations.² WestEd subcontracted with Measured Progress to conduct the studies implementing a computerized standard setting method. Both contracts utilized software developed by Measured Progress under contract, as detailed in the final technical and process reports posted on the Governing Board website.

¹ See final reports available at <http://www.nagb.gov/publications/achievement.html>

² <http://www.nagb.gov/what-we-do/preparedness-research/types-of-research/jss.html>

Software Availability under the Federal Open Data Policy

The Governing Board is making the software developed under these two contracts—Computer-Aided Bookmarking (CAB) and Body of Work Technological Integration and Enhancements (BoWTIE) available for public use via our website with a link to an external site for the download. Technical guides and user manuals to accompany the software download are provided via the Governing Board’s website. Please note that the software used for the contracts has been modified to remove confidential and personally identifiable information based on federal privacy and security requirements that can be found at <http://www2.ed.gov/notices/privacy/index.html> and at http://www2.ed.gov/about/offices/list/om/fs_po/ocio/ias.html. This requirement also adheres to OMB Circular A-130 provisions on electronic information dissemination policies and guidelines available at http://www.whitehouse.gov/omb/circulars_a130_a130trans4.

Limitations:

The Governing Board contracted for final products and deliverables that were developed under contract. The custom software developed to conduct the work was proposed by the contractors and accepted by the Governing Board, and the work was conducted with federal funds. The software and source codes are being made available to the public, as developed for the specific purposes specified under the contract, without technical modifications. The contractors, WestEd and Measured Progress have not asserted copyright to the software.

Therefore the National Assessment Governing Board is making the software available to the public under its unlimited rights contract authority (for both referenced contracts) under Federal Acquisition Regulation (FAR) 52.227-17 Rights in Data—Special Works (DEC 2007). The National Assessment Governing Board grants the public the worldwide, non-exclusive, royalty-free, perpetual right to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, the software created pursuant to the Computer-Aided Bookmarking (under Contract number ED-NAG-10-C0004) and Body of Work Technological Integration and Enhancements (under Contract number ED-NAG-10-C-0003), in any manner and for any purpose, and to have or permit others to do so, subject to a right of attribution. Users of the data are required to acknowledge in any use of the works, or derivatives created therefrom, that the software was initially produced under contracts issued by the National Assessment Governing Board.

THE NATIONAL ASSESSMENT GOVERNING BOARD IS PROVIDING THE SOFTWARE AS IT IS, AND MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND CONCERNING THE WORK—EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING WITHOUT LIMITATION WARRANTIES OF TITLE, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, OR THE PRESENCE OR ABSENCE OF LATENT OR OTHER DEFECTS, ACCURACY, OR THE PRESENCE OR ABSENCE OF ERRORS, WHETHER OR NOT DISCOVERABLE, ALL TO THE GREATEST EXTENT PERMISSIBLE UNDER FEDERAL LAW.

Technical Support

The Governing Board will not provide technical support to users, and will not respond to queries pertaining to the software based on the fact that this work was completed under contract, and was a tool used to provide contract deliverables. Both contracts have expired. In its current form, the software would require significant modification by end users, as detailed in the technical and user guides. The Governing Board therefore will not be providing any technical support regarding the software. To assist users of the software, user manuals and technical guides provide system requirements in detail, and step by step instructions on downloading the software.

Disclaimer: External Links

The data and external links provided in the software documentation and guides are solely for our readers' use, information, and convenience. When readers select a link to an external website, they are leaving the ww.nagb.gov website and are subject to the privacy and security policies of the owners/sponsors of the external website.

The National Assessment Governing Board:

- Does not control or guarantee the accuracy, relevance, timeliness or completeness of information contained on a linked website.
- Does not endorse the organizations sponsoring linked websites or the views they express or the products/services they offer.
- Cannot and does not authorize the use of copyrighted materials contained in linked websites. Users must request such authorization from the sponsor of the linked website.
- Is not responsible for transmissions users receive from linked websites.
- Does not guarantee that external websites comply with Section 508 (Accessibility Requirements) of the Rehabilitation Act.

Trademarks

- Adobe, Acrobat, Reader, Air, Flash, and Flash Player are registered trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- SQL, .NET, Excel, ActiveX, Visual Studio, and Silverlight are registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Java is a trademark of Sun Microsystems, Inc. in the U.S. and certain other countries.

Table of Contents

Introduction.....	1
Software Requirements	2
System Diagram.....	4
Included Files	5
Installing the CAB Software.....	6
Setup the CAB Database	6
Setup IIS and Configuration.....	7
Installing the CAB Administrator Software	8
Installing the CAB Panelist Software	9
Tables	10
Uninstalling the Software	11
Known Issues	12
Deleting a Document File -	12
Missing File Error	12
Deleting an Evaluation	12
Passwords	12
Locked User	13

Introduction

The CAB Technical User Guide is intended to assist in the installation of the CAB software on the server, administrator, and panelist computers.

This is an Adobe Flex application that was coded in Actionscript 4.0. It connects to a Microsoft SQL 2005 database.

Software Requirements

IMPORTANT: This is the known good environment that the software was developed on. Further testing indicated that neither SQL Server 2012[®] or Excel[®] 2010 will work with the current version of the software. Development work will be required to upgrade the software to work with any new versions.

Server Requirements

- Microsoft[®] SQL Server 2005
- Microsoft Visual Studio[®] 2005

NOTE: All versions of .NET[®] Framework listed below are required.

- Microsoft .NET[®] Framework 2
<http://www.microsoft.com/en-us/download/details.aspx?id=6523>
- Microsoft .NET Framework 3.5
<http://www.microsoft.com/en-us/download/details.aspx?id=21>
- Microsoft .NET Framework 4
<http://www.microsoft.com/en-us/download/details.aspx?id=17718>
- Microsoft .NET 4 Extended

NOTE: Ensure that WebORB for .NET is included in the deployment package. WebORB for .NET licensing is for development mode only. Expanded usage will need a licensing agreement purchased from Midnight Coders. For more information visit <http://www.themidnightcoders.com/products/weborb-for-net/licensing.html>.

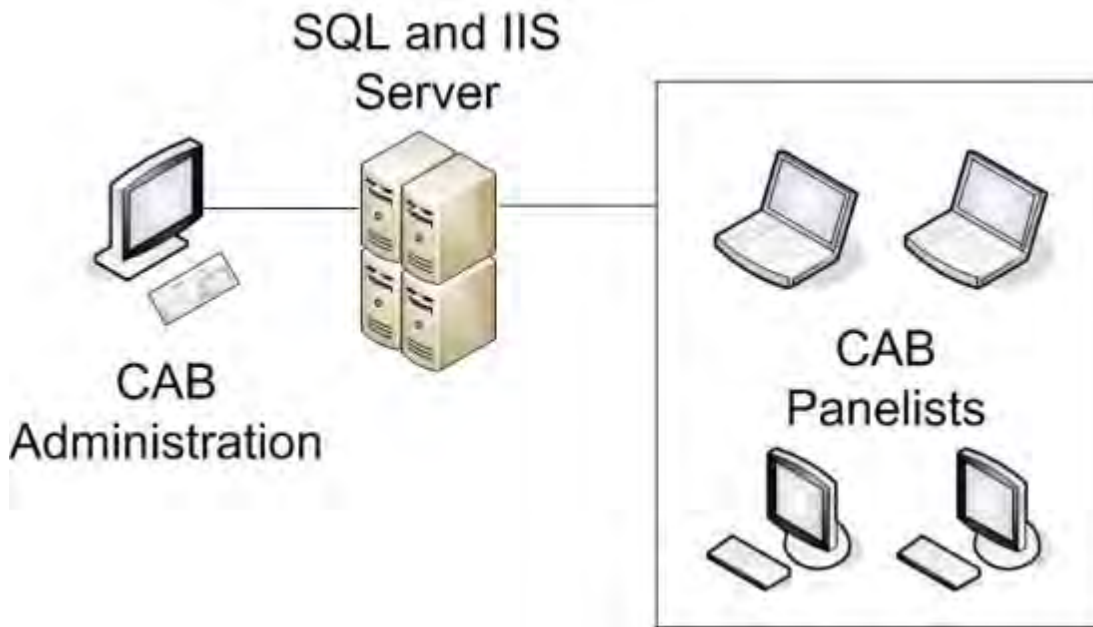
User Workstation Configuration

- Microsoft .NET Framework 4 Client Profile
<http://www.microsoft.com/en-us/download/details.aspx?id=17113>
- Microsoft Silverlight®
<http://www.microsoft.com/silverlight>
- Microsoft Excel 2007
- Adobe Air® (included with Installer)

IMPORTANT: Use only the included version of Adobe Air and do **not** update if prompted. A newer version of Adobe Air may prevent the application from working.

- Adobe® Flash® Player 11 for ActiveX
<http://helpx.adobe.com/flash-player/kb/archived-flash-player-versions.html#playerglobal>
- Adobe Reader®
<https://get.adobe.com/reader>
- Java™ 6 Update 24 – 6.0.240d
<http://www.oracle.com/technetwork/java/javase/downloads/java-se-6u24-download-338091.html>
- CAB Administration Application or CAB Panelist Application

System Diagram



Included Files

The following files are provided:

- **CAB.db.zip** – Compressed database baseline to restore
 - CAB_backup_baseline.bak – database baseline including minimal information and 2 initial users in order to access the software.
- **CAB.deploy.zip** – Files used during setup
 - CAB_Templates folder
 - UserTemplate.xlsx – template file for importing users
 - AdobeAIRInstaller.exe – Adobe Air install file.
 - Clean NAGB Indexes & Stats.sql – SQL query code used to clean the database of Indexes and Statistics
 - Clear NAGB for new session.sql – SQL query code used to clean the database for a new session
 - Clear NAGB Panel.sql – SQL query code used to clear a panel
 - Clear NAGB Panels (ALL).sql – SQL query code used to clear all panels
 - JLDDeletes.sql
 - Nagb.dll – application file for CAB
 - NAGBAdmin.air – Installation file for CAB Administrator application
 - NAGBPanelist.air – Installation file for CAB Panelist application
 - ProdBackupJob.sql – SQL query code used to backup the database
 - remove_nagb.bat – Removes the installed files. Change the IP address of the CAB server prior to running.
 - update_ron.bat – Cleanup batch file to remove the removal code after using remove_nagb.bat
- **CAB.src.zip** – Source code - All source files used for the CAB development

Installing the CAB Software

These instructions explain the procedures for installing the CAB application including the database and server setup.

Software requirements: Each computer that will have the CAB Administration software installed must have a copy of Microsoft Excel 2007 installed. The database server will need to have SQL 2005 installed.

NOTE: Each computer will need to be setup to work for their assigned task.

- Setup the CAB Database
- Installing the CAB Administrator Software
- Installing the CAB Panelist Software

Setup the CAB Database

These instructions explain the procedures for setting up the CAB server. This should be completed prior to setting up the CAB Panelist or Administration computers.

Software requirements: The database server will need to have SQL 2005 installed.

IMPORTANT: The following database items must be performed by a professional database administrator and are only intended as guidelines to assist in making the software work.

1. Create a database (e.g. YOUR_DATABASE_NAME_HERE).

NOTE: Make sure that Mixed Mode authentication is turned on before performing the next step.

2. Create a SQL login and give it db_owner rights to the database.
3. Make note of the credentials and server name as you will need them when setting up the IIS server.
4. From the zip file **CAB.db.zip**, restore the database backup **CAB_backup_baseline.bak**.
5. Make note of the server name, as you will need it when setting up the CAB Administrator and Panelist applications.
6. Create a folder at **C:\InetPub\DocumentFiles** and give it read/write permissions.
7. Create a folder at **C:\InetPub\Evaluations** and give it read/write permissions.

Setup IIS and Configuration

These instructions explain the procedures for installing the CAB application. CAB is a web-based application that is installed on an IIS Server and accessed via an Adobe AIR application.

IMPORTANT: The following items must be performed by a professional network administrator and database administrator and are only intended as guidelines to assist in making the software work.

1. Unzip the file **CAB.deploy.zip**.
2. Restore the website folder **NAGBWebORB** to the root location (**Inetpub**) of the selected IIS server.
3. Using IIS create the website **weborb4** under the default website.
4. Assign **weborb4** to the virtual directory **Inetpub\NAGBWebORB**.
 - a. Right-click the **weborb4** website and select **Properties**.
 - b. Set the virtual directory to **NAGBWebORB** created above. Note that this folder should be at the same directory level as the two folders setup during the database setup process.

IMPORTANT: This folder must be the root location for the application to run correctly.

5. Using Microsoft Notepad or another text editor, in the **NAGBWebORB** directory edit the file **Web.config** and make the following changes in the section **connectionStrings** to change the connection string to:
 - a. Set catalog = *[YOUR DATABASE NAME]*
 - b. Set source = *[YOUR SERVER HOST NAME or IP ADDRESS]*
 - c. Set User ID and Password= *[YOUR DATABASE CREDENTIALS]*

Installing the CAB Administrator Software

These instructions explain the steps to setup the CAB Administrator application. The database setup must be completed prior to setting up the CAB Administrator and Panelist applications. See "Setup the CAB Database" on page 6 for more information.

Software requirements: The CAB Administrator computer must have Microsoft Excel 2007 installed to make use of all application features.

IMPORTANT: You will need to know the name of the server prior to completing the steps below.

1. Open the **CAB Deploy** folder in the file **CAB.deploy.zip**.
2. Double-click the **AdobeAirInstaller.exe** file to install Adobe Air.
3. When Adobe Air finishes installing, double-click the **NAGBAdmin.air** file to start the installation.
4. Click **Install** when prompted to verify due to an unknown publisher.
5. Set the installation location and shortcut settings and click **Continue**.
6. The application will then automatically open.

To run the application do the following:

1. Double-click CAB Administrator on the desktop.
2. From the **Server** drop-down, select **Add a Server**.
3. Enter the server name or IP in the string: `http://[SERVER_NAME]/weborb4/weborb.aspx`.
4. Enter the following default information to log into the CAB Administration software:

User name: *SessionAdmin*
Password: *system*
5. If the installation of the database and software were completed correctly, the software will open with two items in the Elements drop-down. Please see the CAB Administration User Guide for more information on using the software.

IMPORTANT: Do not change this user name and password as you will lock yourself out of the application.

Installing the CAB Panelist Software

These instructions explain the procedures for installing the CAB Panelist application. The database setup must be completed prior to setting up the CAB Administrator and Panelist applications. See "Setup the CAB Database" on page 6 for more information.

Software requirements: Each computer that will be used as a CAB Panelist will need to have Adobe Air installed as well as the Panelist application. The Adobe Air installer has been included with the installer for your convenience.

IMPORTANT: You will need to know the name of the server prior to completing the steps below.

NOTE: The installation files can be housed on a server and accessed via the network to install on each panelist computer.

1. Open the **CAB Deploy** folder in the file **CAB.deploy.zip**.
2. Double-click the **AdobeAirInstaller.exe** file to install Adobe Air.
3. When Adobe Air finishes installing; double-click the **NAGBPanelist.air** file to start the panelist installation.
4. Click **Install** when prompted to verify due to an unknown publisher.
5. Set the installation location and shortcut settings and click **Continue**.
6. The application will then automatically open.

To run the application do the following:

1. Double-click **CAB Panelist** on the desktop.
2. From the **Server** drop-down, select **Add a Server**.
3. Enter the server name or IP in the string: *http://[SERVER_NAME]/weborb4/weborb.aspx*.
4. Enter the following information to log into the CAB Panelist software:

User name: *SamplePanelist*
Password: *sample*

IMPORTANT: Do not change this user name and password.

Tables

The following list provides the names of the tables in the database that can be modified to change the descriptions of selected items.

CAB Administration

Table	Modifies
dbo.tblProficiency	Set the text of the proficiency levels (i.e., Below Basic, Proficient, or Advanced)
dbo.tblDocumentType	Set the document types
dbo.tblOccupation	Set the panelist occupations
dbo.tblPanelType	Set the panel types
dbo.tblRedStarSet	Set the Red Star set descriptions
dbo.tblSubject	Set the subject names (i.e., Math or Reading)
dbo.tblUserDegree	Set the list of degrees (i.e., M.A. or PhD)
dbo.tblUserDistrictSize	Set the district size descriptions

Uninstalling the Software

To uninstall the CAB Admin or panelist application:

1. Open the **CAB Deploy** folder in the file CAB.deploy.zip.
2. Double-click the **NAGBAdmin.air** or **NAGBPanlist.air** file to start the install application.
3. Click **Uninstall** when prompted.
4. Click **Finish**.

Additional SQL queries are included in the deploy folder for clearing the database and backing up a production database after completing a standard setting.

Known Issues

The following information describes known issues and workarounds in the CAB Administrator.

Deleting a Document File -

Missing File Error

If you try to delete a file and receive an error message that the file is missing, follow the steps below:

1. Upload a new temporary file.
2. Try to delete the original file. The "missing file" error message displays.
3. Delete the temporary file. The original file is removed from the list.

Deleting an Evaluation

If you try to delete an evaluation that is linked to a panel and receive an error message, follow the steps below:

1. Open the evaluation.
2. Remove all the questions from the evaluation.
3. Save the evaluation.
4. Delete the evaluation.
5. Return to the dashboard and deactivate the round.
6. Return to the panel and you now have the option to delete the evaluation from the round.

Passwords

- Do not change the system user passwords as there is a bug causing that doesn't allow the software to save the new password to all of the necessary locations in the database.
- Passwords are kept unencrypted and are shown in pure text in the database.

Locked User

- If a panelist clicks the X in the upper right corner of the application rather than clicking the link to Logout of the software their account will become locked.
- Log into the Administration application and unlock the user in the User Manager. See "User Manager" on page 1 of the CAB Administration User Guide.