Technology Readiness

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Agenda

• Overview of the Smarter Balanced Assessment System
• Smarter Balanced Field Test
• Minimum System Requirements
• Technology Readiness Tool and Calculator
• Smarter Balanced Student Registration Process
• Preparing for Online Assessments
Smarter Balanced Assessment System

- 25 states working together to develop a student assessment system
- Development funded by federal grant
- Assesses students in grades 3-8, and 11 in mathematics and English language arts (aligned to Common Core standards)
- Operational in 2014-15 school year
- Integral part of AB 484 (CalMAPP)
Goodbye, Scantron
Hello, Online, Computer-based Assessments

Student using Smarter Balanced Secure Browser software application

Test Proctor using standard Web browser
Smarter Balanced Field Test

- Objective is to “test the test” including items and technology (but not to measure individual student achievement)
- AB 484 requires all students in grade 3 through 8 to participate
- AB 484 requires all students in a scientific sample in grade 9 and 10 to participate
- AB 484 requires all students in a scientific sample in grade 11 to participate
  - Other grade 11 students may participate
Smarter Balanced Field Test (cont)

- Field Test will occur from March 18 through June 6, 2014
- Schools will be assigned to a six week window
- Students will take either the mathematics OR English language arts assessment
- Subject will be assigned by CDE
- Assignment will be by school and grade
Smarter Balanced Field Test (cont)

- California Technical Assistance Center

Phone: 1-800-955-2954

E-mail: caltac@ets.org

For Field Test questions regarding technology, administration guidelines, testing windows, test orders, training opportunities
Student System Requirements

Microsoft Windows

• Windows XP* Service Pack 3 (proposed phase out: end of school year 2015-16)
• Windows Vista, 7, 8, 8.1
• Windows RT excluded at this time

* Microsoft ends support for Windows XP in April 2014
Student System Requirements

Apple Mac OS X

- Mac OS X 10.4.4 (proposed phase out: end of school year 2014-15)
- Mac OS X 10.5 PowerPC (proposed phase out: end of school year 2014-15)
- Mac OS X 10.5 (Intel), 10.6, 10.7, 10.8, 10.9
Student System Requirements

Apple iOS

- Operating system used on Apple devices such as iPads
- 6.x (Guided Access feature)
- 7.x (released mid-September 2013)
- Physical keyboard requirement
Student System Requirements

Android OS

- Open-source operating system used on many different tablets and smartphones (version 4.x required)
- Manufacturers customize Android to meet specific hardware needs
- Specific models need to be certified by Smarter Balanced
- Physical keyboard requirement
Student System Requirements

Google Chrome OS

• Not to be confused with the Chrome Web browser
• Version 19.x or higher required
• Devices known as Chromebook (wireless) or Chromebox (hardwired to network)
• Chromebook is similar to a laptop in form factor, but typically not as expensive
• Chromebox has connections for display monitor, keyboard, mouse, network
Student System Requirements

Linux OS

• Typically freely available operating system for desktops and laptops
• Fedora 6 or higher
• Ubuntu 9 or higher
Student System Requirements

Virtual Desktop

• Virtual Desktop Infrastructure (VDI) technology
• Thin client or zero client technology
• Majority of processing on server-side
• Many manufacturers offer solutions (test using the Secure Browser and the Practice Tests!)
Student System Requirements

Miscellaneous

• 10” class diagonal display
• 1024x768 resolution (older netbooks may not meet this requirement)
• Physical keyboard
  – Be aware of possible bluetooth interference with 2.4Ghz wireless data networks
• No stylus or drawing device requirement
• Headphones (ELA and text-to-speech)
• Printer (student accommodation)
Student System Requirements

Secure Browser

• Smarter Balanced Secure Browser software application installed on each student’s computing device
• Updated version released at the beginning of each school year
• Field Test version available Nov 18
• Need to uninstall Pilot Test version
Student System Requirements
Secure Browser (cont)

- Can be used to access Practice Test
  - Launch Secure Browser, click on Training Test
  - Required for text-to-speech and Braille
- Ensures test security (kiosk mode)
- Checks for list of “prohibited” applications at startup and during execution
- HTML 5 and Javascript (no Flash Player or Java VM required)
Student System Requirements

Network Bandwidth

- Estimated 20K bps average for each student connected to system
- Network activity may spike at startup and periodically during item pre-fetch
- More devices may require more internal network hardware (i.e. wireless access points, access layer switches)
- More Internet bandwidth may be required from school to district, and/or district to county office
Smarter Balanced Server Hosting

Consortium Hosted
(Item Authoring, Item Bank, Data Warehouse, Reporting, Digital Library)

State Hosted
(Test Delivery, Test Scheduling, Test Registration, Scoring)

Internet
Are Schools Ready, Technology-wise?

- Smarter Balanced Technology Readiness Tool (TRT)
  - User account required
  - Number and type of devices at school-level
  - Network capacity at school-level
  - Test Window (days) at school-level
  - Test Sessions per day at school-level
TRT Benefits

• Generates school-level readiness reports for devices and network

• Reports can be used to justify spending decisions

• Report allows state and counties to identify schools where insufficient technology exists (Dec 13 consortium snapshot)
List of schools in a district:

<table>
<thead>
<tr>
<th>Organization</th>
<th>Org Code</th>
<th>% of Device to Test-Taker Readiness of the School</th>
<th>% of Network Readiness of the School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Elementary School 3</td>
<td>CA-999999999999991</td>
<td>29%</td>
<td>36%</td>
</tr>
<tr>
<td>Test Middle School 4</td>
<td>CA-999999999999992</td>
<td>64%</td>
<td>54%</td>
</tr>
<tr>
<td>Test School 1</td>
<td>CA-999999999999999</td>
<td>&gt;100%</td>
<td>&gt;100%</td>
</tr>
<tr>
<td>Test School 2</td>
<td>CA-999999999999990</td>
<td>&gt;100%</td>
<td>&gt;100%</td>
</tr>
</tbody>
</table>

- Percent of students who can test given the number of available devices
- Percent of students who can test given the network capacity
- “What-if” calculator
How many days will it take to test?

- Smarter Balanced Technology Readiness Calculator
  - Web-based open to public
  - Inputs: number of students, number of computers, computer hours available per day, Internet bandwidth
  - Outputs: estimated number of days to administer tests, estimated network bandwidth required
Technology Readiness Calculator Sample

Number of students testing: 600
Number of computers available: 60
Computer hours available per day: 4
Internet connection speed: 10 Mbps

Estimated minimum number of days to complete ELA and Math assessments: 20.00 days
Estimated network bandwidth required: 1.20 Mbps (12.00% of total bandwidth)

http://www3.cde.ca.gov/sbactechcalc (open to public access)
Smarter Balanced Student Registration

- District or Independent Charter School
  - Student-level accommodations *

- CA Smarter Balanced Student Registration System
  - Student-level registration

- CDE CALPADS System
  - CDE CALPADS submission

* Reference Smarter Balanced Usability, Accessibility, and Accommodations Guidelines (http://www.cde.ca.gov/292859)
Preparing For Online Testing

• Engage a multi-disciplinary group at the district and school levels that can plan, recommend policies, develop procedures, and resolve issues before and after testing begins

• Establish the goals for the group, milestones (with expected completion dates) for activities and degree of authority
Preparing For Online Testing (cont)

• Review policies and procedures regarding access and use of technology
  – Are there sufficient protections in place to ensure equipment and bandwidth are allocated consistent with the established priorities?
  – Are the points of contact established (and communicated) with the authority to resolve issues related to the use of technology during testing?

• Share practices with other districts and leverage the CDE and County offices when possible
Resources

- CDE Technology Readiness Web page: http://www.cde.ca.gov/293317
- Smarter Balanced Technology Strategy Framework and System Requirement Specifications (soon to be updated)
- TRT Key Local Considerations document
- Field Test – California Technical Assistance Center, 1-800-955-2954, caltac@ets.org
- CDE e-mail: sbac-itreadiness@cde.ca.gov