



Technology User Guide

Volume IV: Troubleshooting

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Introduction

About This Guide 6

Working with DRC INSIGHT

What’s Covered in This Section 8
 Online Tools Training (OTT) 8
 Online Tools Training (OTT)..... 9
 The Monitor Setting Verification Test..... 10
 Changing the Monitor’s Contrast or Brightness 11
 Windows Operating System..... 11
 Mac (OS X or macOS)..... 11
 iPad Devices..... 11
 Chromebook Devices..... 11

FAQs, Hints and Tips

General Questions 14
 Common Technical Questions and Answers..... 16
 Question: Can we mass deploy test software to all student computers?..... 17
 Modifying the Setup File 17
 Silent Install Example 18
 Silent Uninstall Example 18
 Testing Site Capacity Estimator Questions 19
 iPad Questions 23
 iPad Hints and Tips 27
 Chromebook Hints and Tips 28

Error Messages

Message: A Communication System Error has Occurred	32
Message: Chromium OS version xxxx.xx.x is not supported by DRC INSIGHT	32
Message: Configuration Error	32
Message: Configuration Not Found	33
Message: Connection Error	33
Message: Connection Error Retrieving Content	34
Message: Connection Error Retrieving Content	34
Message: Connection Retry is in Progress.....	35
Message: Could Not Retrieve Testing Information.....	35
Message: Device Registration.....	36
Message: Download Of Upgrade Failed	36
Message: Failed to Load Device Information	36
Message: Guided Access Is Not Enabled.....	36
Message: Internet Connection Error	37
Message: <i>Operating System version</i> is not supported by DRC INSIGHT.....	37
Message: Registration Failed	37
Message: Session Ended	38
Message: Session Inactive. Please raise your hand and wait for help.....	38
Message: Session Status Outside Window.....	38
Message: The device's operating system has been updated and is in the process of being certified by DRC.	38
Message: Your Client Attempted To Access An Invalid URL.....	39
Message: Your Client Failed The Readiness Check.....	39
Message: Your Client Is Out Of Date.....	39
Message: Your Client Is Out Of Date.....	39
Message: Your Device Has Not Been Registered	40
Message: Your Testing Session Has Been Stopped.....	40



Introduction

About This Guide

This user guide is part of a multi-volume set that describes how to configure, install, manage, and troubleshoot the DRC INSIGHT Online Learning System. This volume, *Volume IV: Troubleshooting*, describes tools and testing information to help you troubleshoot your testing environment and verify that it is ready for testing.

This guide discusses how to use some of the testing tools, including Online Tools Training (OTT) and the Monitor Verification Test. This guide also contains Frequently Asked Questions (FAQs), Hints, and Tips for online testing. In addition, the guide explains the various error messages that you may encounter while working with Central Office Services (COS) and DRC INSIGHT and provides information to help resolve them.

.....
! **Important:** Throughout this user guide, the Information icon (**!**) indicates important information or crucial tips.
.....



Working with DRC INSIGHT

What's Covered in This Section

This section describes tools that you can use to help prepare for and become familiar with the online testing environment.

Online Tools Training (OTT)

This topic describes the OTT, a series of sample test questions to help introduce students to the testing tools available in the online environment.

The Monitor Setting Verification Test

This topic describes the Monitor Setting Verification test, available in your state's Portal site, that helps you determine whether the monitor settings for the testing computer are configured for optimal testing.

Online Tools Training (OTT)

OTT is a set of sample test questions to introduce students to the tools available during testing and prepare them for online assessments. This training allows students to try the features of the testing software before the actual test.

OTT is not designed to cover the test content—the goal is to instruct the student about using the testing application, not to assess skills. The sample OTT questions demonstrate the features of the testing environment and the OTT tests are not scored.

The appropriate site personnel should review the OTT tests before the students begin the test administration. All students who will be testing online should have at least one opportunity to review OTT tests for their subject and/or grade.

To try OTT, do the following:

1. The first step depends on the type of testing device.
 - From a Windows computer, select **All Programs–DRC INSIGHT Online Assessments–DRC INSIGHT Online Assessments** (or click the **DRC INSIGHT Online Assessments** desktop shortcut).
 - From a Mac (OS X or macOS), select **Applications–DRC INSIGHT Online Assessments–DRC INSIGHT Online Assessments.app** (or click the **DRC INSIGHT Online Assessments** desktop shortcut).
 - From a Linux machine, select **opt/DRC INSIGHT Online Assessments/DRC INSIGHT Online Assessments**.
 - From an iPad device, press **DRC INSIGHT** to start the DRC INSIGHT App.
 - From a Chromebook device, click on the DRC INSIGHT App.
2. When DRC INSIGHT launches, if you configured a single testing program, the main page for that testing program displays. If you configured more than one testing program, a page displays that you can use to select the testing program. After you make your selection, the main page displays. From that page, click or select **Online Tools Training**.
3. Select a subject by clicking on it.
4. Enter the username and password provided on the screen and click **Sign In**.
5. Follow the instructions on the screen to take the practice tests and use the test tools.

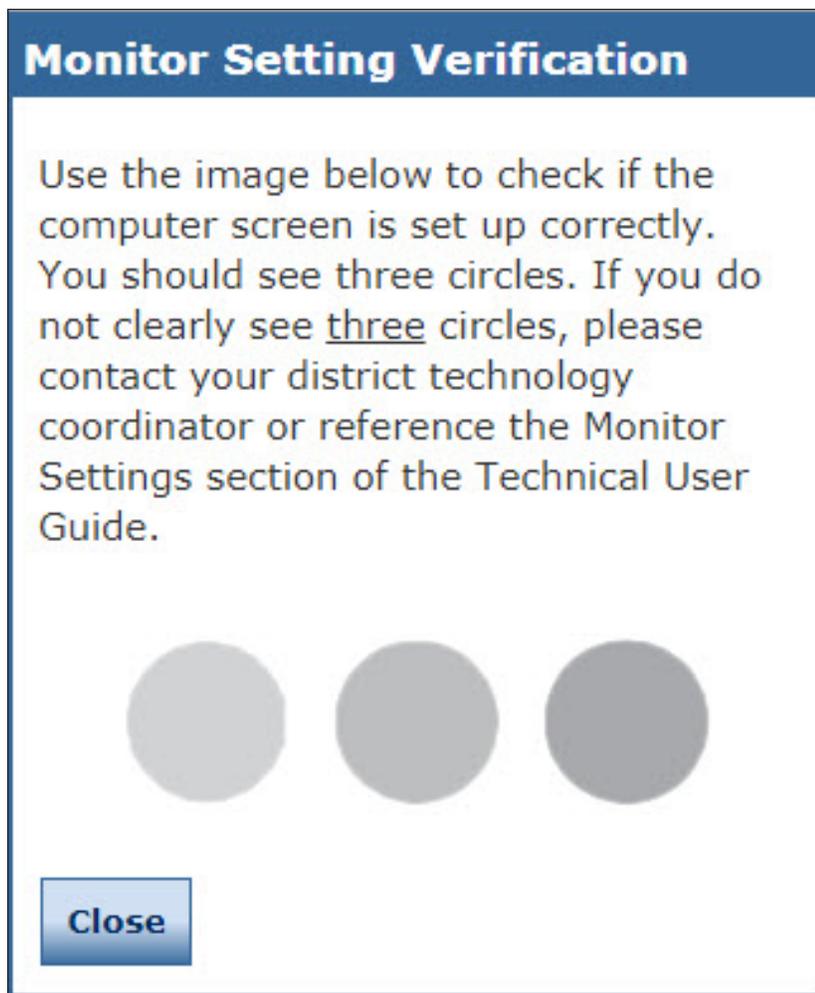
Note: There are no restrictions for accessing OTT—students are allowed to access it as often as necessary.

The Monitor Setting Verification Test

After you sign in to start a test, a screen similar to the following displays to help determine whether your monitor is set up correctly to display the online tests.

If you do not see three shaded circles on the monitor display, a student will have difficulty answering some of the online questions. To resolve the problem, you must modify the brightness and/or contrast settings for the testing computer's monitor until three circles display clearly.

You can run the Monitor Setting Verification test by signing in to your state's Portal site, selecting **MY APPLICATIONS–General Information–Downloads**, and clicking the **Monitor Setting Verification** button.



Changing the Monitor's Contrast or Brightness

There are many ways to change the contrast or brightness of your display depending on the operating system, the computer, the graphics card, and the type of monitor you are using. The following are some ideas to try to change the contrast or brightness. For a specific hardware configuration, you also can try searching the Internet using a search such as *changing the contrast for operating system x or monitor y*.

Windows Operating System

- On a laptop computer, look for a half-white/half-black circle on the keyboard. This function key changes the contrast.
- On a desktop computer, look for an option on the monitor, or monitor menu, to change the contrast and brightness.
- Identify the type of graphics card—NVIDIA, Intel, or ATI—and locate options for your graphics card from the Control Panel: **Control Panel—System Properties—graphic cards** tab.
- Locate a menu called Monitor Settings, Color, or Graphic Settings and change the contrast (be sure to check Advanced Settings). If you can't find a Contrast option, look for Gamma, Saturation, or Hue.
- Right-click on the desktop to bring up menu options for Intel and ATI cards.

Note: ATI's menu option is called Catalyst Control Center; Intel's option is called Intel Graphics Media Accelerator Driver.

- Select the folder **c:\Program Files\graphics card**, where: *graphics card* is Intel, NVIDIA, or ATI.

Mac (OS X or macOS)

- To change the brightness, use the keyboard buttons, or select Apple button—**System Preferences—Accessibility—Monitor** and use the Change the Brightness slider.
- To increase the contrast, use the following key combination:
Command key + Option key + Ctrl key + . (period)
- To decrease the contrast, use the following key combination:
Command key + Option key + Ctrl key + , (comma)

Linux

For Linux desktop monitors, check the settings in the Monitor menu options.

iPad Devices

For iPad devices, refer to your iPad documentation.

Chromebook Devices

For Chromebook devices, refer to the Google Chrome help or documentation.



FAQs, Hints and Tips

What's Covered in This Section

This section contains a list of frequently asked questions (FAQs), as well as helpful hints and tips regarding configuring, installing, and using DRC INSIGHT and the Central Office Services (COS) Service Device (COS - SD) software. The questions and answers are technical in nature and cover the following environments:

- Windows
- Macintosh (OS X or macOS)
- Linux
- iOS (iPad devices)
- Chrome OS (Chromebook devices)

The FAQs and Hints and Tips are divided into various categories. In addition, the Common Technical Questions and Answers cover the common technical support issues you may encounter, and provide tips, techniques, and workarounds to resolve them.

General Questions

Q1. Is there a way to provide a failover COS - SD, or a quick way to redirect if a COS - SD fails during the testing window?

A: Because a COS - SD is configured using COS configurations, it is possible to quickly switch COS - SDs if necessary. Use COS to select the ORG Unit in which the device is configured, add the new COS - SD to the configuration, and then restart DRC INSIGHT on the Testing Device. When DRC INSIGHT restarts, it automatically uses the new COS - SD.

Q2. Do we use an .msi file for installation?

A: The DRC INSIGHT and COS - SD installation file types vary by operating system:

- The Windows version uses an .exe file for the COS - SD and an .msi file for DRC INSIGHT.
- The Mac (OS X or macOS) version uses a .dmg file for the COS - SD and a .pkg file for DRC INSIGHT.
- The Linux version uses a .sh file for the COS - SD and a .deb file for DRC INSIGHT.
- The iOS version uses an App Store app and a .plist file for DRC INSIGHT.
- For Chrome, the DRC INSIGHT App ID and URL is contained in a .txt file.

Q3. Do we have to have a COS - SD in each school, or can it be on a shared district server? If so, which approach do you recommend?

A: It depends on your network's capacity and reliability. With a dedicated COS - SD you can offload about 50% of the traffic from the Internet to your COS - SD.

Because student computers need uninterrupted connectivity to the COS - SD, we recommend one COS - SD per school. But, you may be able to share a COS - SD if you have enough network capacity.

Q4. Do we need to go to each student's computer to enable automatic updates?

A: No. Just remember to enable automatic updates when you configure the Testing Device in COS (see [COS Online Help](#)). After installation, DRC INSIGHT automatically checks for software updates and installs them after the student clicks **Upgrade**.

Q5. How are test responses received?

A: The student logs in by connecting with DRC. Tests are sent directly from DRC and responses are sent directly to DRC. For more information, see *Volume I: Introduction to Online Testing*.

Q6. How do I test that a COS - SD is working?

A: You can verify the status of a COS - SD from the COS Dashboard (see [COS Online Help](#)).

General Questions (cont.)

Q7. Can we install DRC INSIGHT on one central server/computer and use shortcuts, or other links, to share it for testing across different machines?

A: No. DRC assumes that DRC INSIGHT is installed on each computer that will be used for testing. Any other configuration is unsupported and may produce unexpected results.

Q8: The sound for Text-To-Speech (audio) does not work. What should I do?

A: Ensure that the accommodation has been downloaded to the COS Configuration. Check the COS Content Management tab (see [COS Online Help](#)). Then, run the System Readiness Check, verify that the sound (Audio Capability) is working, and adjust the volume before testing (see *Volume III: DRC INSIGHT*).

Common Technical Questions and Answers

This section describes detailed resolutions to common technical support issues you may encounter, as well as tips, techniques, and workarounds to resolve them.

Question: How do I update test forms on a COS - SD?

To check/update your test forms, do the following:

1. From the Portal, navigate to your testing program and select **Central Office**.
2. Select a Testing Program and Site.
3. From the Configurations page, select the ORG Unit in which the COS - SD is configured.
4. Select the **Content Management** tab to open the Content Management page. The various test administrations are listed in the Admin column.
 - If the test administration has a check mark next to it, you do not need to do anything. COS checks in with the DRC servers several times every hour and automatically uploads content to the COS - SD.
 - If the test administration does not have a check mark next to it, place a check mark next to it and click **Update Configuration**.

Note: Depending on your network, the update can take a while. You can select the **Service Devices** tab to view the update progress of the COS - SD in the Status column.

- If a new administration is discovered during the check-in process, it will be listed. If you want to update the new administration with TTS/HVA or VSL files, place a checkmark next to the appropriate accommodation and click **Update Configuration**.

Note: When you check an accommodation checkbox, a large amount of audio and/or video files will be downloaded. If no student testing requires the accommodation, do not check the checkbox.

5. Click **Update Configuration**. For details about this process, see *Working with Content Management* in [COS Online Help](#).

Common Technical Questions and Answers (cont.)

Question: Can we mass deploy test software to all student computers?

Yes, but the details vary depending on which technology you use for deployment and the operating system to which you deploy. Basically, you can configure the installer using arguments when you deploy it in a non-interactive or silent mode. For technical details, see [Modifying the Setup File](#).

Modifying the Setup File

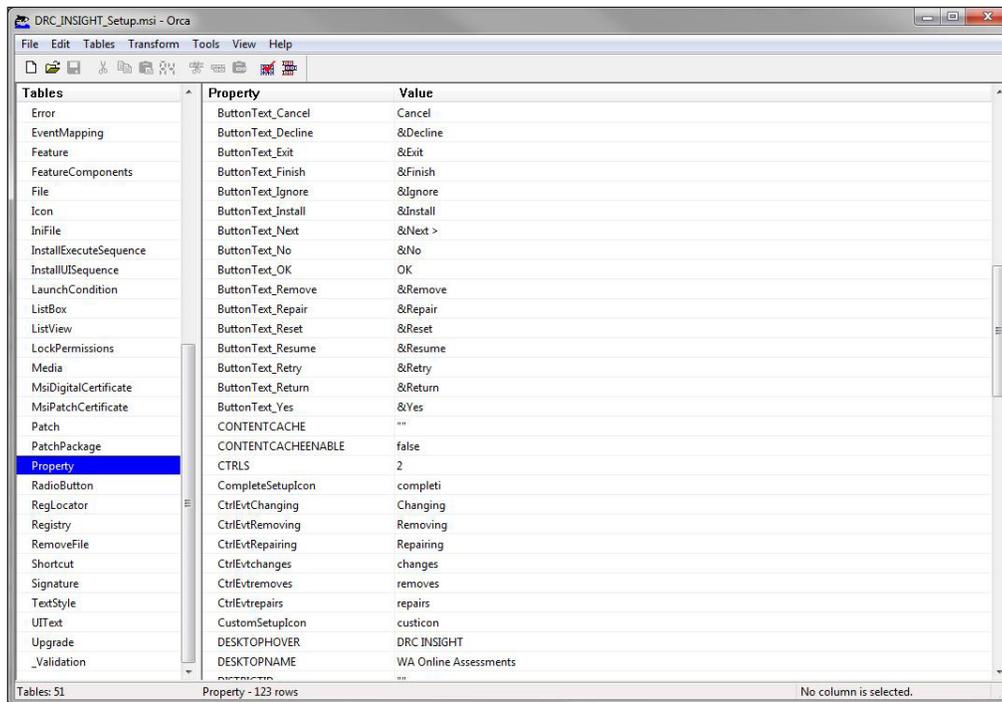
You can modify the DRC_INSIGHT_Setup.msi installation file to install your software on many machines using different installation settings. To modify the file, you need the ORCA installer package from the Windows SDK for Windows Installer Developers. This package is available at the following location:

<https://developer.microsoft.com/en-us/windows/downloads/windows-10-sdk>

Download the .ISO file, extract the files, and double-click on **Orca.msi** to install the Orca.exe file.

To modify the setup file, do the following:

1. Start Orca.
2. Select **File–Open** and open the MSI installer.
3. Select **Property–Table** to open the Property table (see the figure below). Make all of your changes in this table.



Property	Value
ButtonText_Cancel	Cancel
ButtonText_Decline	&Decline
ButtonText_Exit	&Exit
ButtonText_Finish	&Finish
ButtonText_Ignore	&Ignore
ButtonText_Install	&Install
ButtonText_Next	&Next >
ButtonText_No	&No
ButtonText_OK	OK
ButtonText_Remove	&Remove
ButtonText_Repair	&Repair
ButtonText_Reset	&Reset
ButtonText_Resume	&Resume
ButtonText_Retry	&Retry
ButtonText_Return	&Return
ButtonText_Yes	&Yes
CONTENTCACHE	""
CONTENTCACHEENABLE	false
CTRLS	2
CompleteSetupIcon	completi
CtrlEvtChanging	Changing
CtrlEvtRemoving	Removing
CtrlEvtRepairing	Repairing
CtrlEvtchanges	changes
CtrlExtremoves	removes
CtrlEtrepairs	repairs
CustomSetupIcon	custicon
DESKTOPHOVER	DRC INSIGHT
DESKTOPNAME	WA Online Assessments
...	...

Figure: Property Table

Common Technical Questions and Answers (cont.)

- 4. The following are the different properties you can change. To make a change, double-click on the value of the property, enter your value, and click **Enter**.

.....
! Important: Make sure that there are no spaces before your input—do not put spaces in front of any attribute that you modify.

oulds

The alphanumeric ORG Unit ID generated by COS.

httpsproxy

The URL and secure port of the proxy host server. Depending on your configuration, this URL can start with either http:// or https://.

- 5. After you make your changes, save the file and overwrite the original DRC_INSIGHT_Setup.msi file.

Silent Install Example

The following example shows the syntax you would use to install DRC INSIGHT silently in Windows 7 machine.*

DRC_INSIGHT_Setup.msi /qn

Silent Uninstall Example

The following example shows the syntax you would use to uninstall DRC INSIGHT silently in Windows 7 for a 32-bit and 64-bit machine.*

msiexec /x DRC_INSIGHT_Setup.msi /qn

**For Microsoft Windows 8, use /qb instead of /qn.*

Testing Site Capacity Estimator Questions

Q1. What is the Testing Site Capacity Estimator?

A: The Testing Site Capacity Estimator is an Excel spreadsheet file that is designed to help districts and schools estimate the time it will take students to download the tests and move to the next question after they send a response. These time estimates are based on the following factors:

- Whether COS Service Devices (COS - SDs) with Content Hosting turned on are being used on the network or at the site.
- The site's knowledge of the bandwidth provided by their Internet Service Provider (ISP), as well as the bandwidth provided by their Local Area Network (LAN) and Wide Area Network (WAN).
- The estimated average connection speed that testing devices have to the network.
- The estimated percentage of total bandwidth that is available for testing.

This tool helps sites plan their testing more effectively based on factors such as their network traffic, the number of students testing at the same time, and the type of test: a fixed-form test, with or without accommodations, or a Computer-Adaptive Test (CAT). Wisconsin Forward

Q2. What information does the site have to supply?

A: The site must supply the following information:

- An indication of whether a COS - SD is being used, either at the site level or the network level.
- An estimate of the number of students that will be testing at the same time for fixed-form, CAT, and accommodated tests, plus an estimate of the total number of students testing at the same time.
- Estimates for both the percentage of students starting the test at the same time and for students sending responses at the same time.
- The ISP connection speed.
- The WAN and LAN connection speeds.
- An estimate of the percentage of bandwidth that is currently available for testing.
- An estimate of the average connection speed for testing devices.
- An estimate of the percent of bandwidth available for testing.

Because testing is usually not the only process running on a network, each site must estimate how much capacity other processes are consuming, subtract that estimate from 100, and enter the result in the Percent of Bandwidth Available for Testing field.

Testing Site Capacity Estimator Questions (cont.)

Q3. Are the estimates for each student, or for all students testing?

A: The various *average form download times* estimate the time required to download a test that *each student* will experience if *all* students start testing at the same time.

The various *average wait between item times* estimate times for *individual students* because students finish questions at different times.

Note: These calculations are conservative estimates because the Testing Site Capacity Estimator cannot factor all of the possible variables, including network and Intranet traffic, that can impact performance.

Q4. Is it possible to arrive at different estimates for these numbers using different software tools?

A: Yes. Different software tools might connect to servers that are different distances away and use different Internet paths to reach those servers.

Q5. What does *students testing at the same time* mean?

A: The various *students testing at the same time* numbers indicate the number of students in your school or district network who will download tests at roughly the same time (students who will start testing within a few seconds of each other). Because all students do not start a test at the same time, these numbers are used to estimate what would happen at maximum load. For details, see “The Testing Site Capacity Estimator” on page 120.

Q6. What times does the Testing Site Capacity Estimator calculate?

A: The Testing Site Capacity Estimator uses the input values and estimates to calculate/estimate the following time values.

Average Time to Download Test Engine is the average time a tester will wait for the test engine software to download as they log in for testing.

Average Time to Download a Fixed-Form Testing Form is the average time required to download a fixed-form test.

Average Time to Download a CAT Form is the average time required to download a CAT test.

Average Time to Download an Accommodated Testing Form is the average time required to download a test form containing an audio or visual accommodation: HVA, TTS, or VSL.

Average Wait Time Between Fixed-Form Items is the average time required to save a response and load the next question for a fixed-form test.

Average Wait Time Between CAT Form Items is the average time required to save a response and load the next question for a CAT test.

Average Wait Time Between Accommodated Form Items The average time required to save a response and load the next question for test containing an audio or visual accommodation.

In addition to estimating these values, the Testing Site Capacity Estimator provides a color scale of each of the calculated values indicating the expected testing performance: Good (green), Marginal (yellow) or Poor (red).

Testing Site Capacity Estimator Questions (cont.)

Q7. How would we use the Testing Site Capacity Estimator?

A: Here is an example. First, assume the following set of conditions.

1. You are using a COS - SD with Content Hosting at the site.
2. Approximately 1000 students are testing using a fixed-form test at the same time, without accommodations.
3. Approximately 100 students are testing using a fixed-form test at the same time, with accommodations.
4. Approximately 100 students are testing using a CAT test at the same time, without accommodations.
5. About 30% of these students will start the test at the same time.
6. About 10% of these students will send their responses at the same time.
7. You have an ISP connection capacity of 10000 Mbps, a WAN connection capacity of 1000 Mbps, a LAN connection capacity of 1000 Mbps, the average connection speed for testing devices in the network is 10 Mbps, and 80% of the total bandwidth is available for testing.

After you enter these values in the Testing Site Capacity Estimator, the following results display:

- The **Average Time to Download Test Engine** is 13.21 seconds.
- The **Average Time to Download a Fixed-Form Testing Form** is 7.25 seconds.
- The **Average Time to Download a CAT Form** is 2.51 seconds.
- The **Average Time to Download an Accommodated Testing Form** is 3.65 seconds.
- The **Average Wait Time Between Fixed-Form Items** is .26 seconds.
- The **Average Wait Time Between CAT Form Items** is .61 seconds.
- The **Average Wait Time Between Accommodated Form Items** is 2.11 seconds.

The Testing Site Capacity Estimator color legend indicates that the Average Time to Download Test Engine is Marginal Performance, the Average Time to Download a Fixed-Form Testing Form is Good to Marginal Performance, the Average Wait Time Between Accommodated Form Items is Poor Performance, and the remainder of the times are rated as Good Performance.

Testing Site Capacity Estimator Questions (cont.)

Now, change the number of students testing with fixed-form from 1000 to 600 and the number of students testing with an accommodated test from 100 to 50, reducing the total number testing at the same time from 1200 to 750. The Testing Site Capacity Estimator provides the following results.

- The **Average Time to Download Test Engine** is now 8.35 seconds.
- The **Average Time to Download a Fixed-Form Testing Form** is now 4.55 seconds.
- The **Average Time to Download a CAT Form** is now 1.59 seconds.
- The **Average Time to Download an Accommodated Testing Form** is now 2.30 seconds.
- The **Average Wait Time Between Fixed-Form Items** is now .25 seconds.
- The **Average Wait Time Between CAT Form Items** is now .60 seconds.
- The **Average Wait Time Between Accommodated Form Items** is now 1.43 seconds.

The Testing Site Capacity Estimator color legend now indicates that all of these times are rated as Good Performance, except for the Average Wait Time Between Accommodated Form Items, which is rated as Marginal Performance. You can continue tweaking the numbers until you determine a suitable configuration.

iPad Questions

Q1. Can I install a COS Service Device on an iPad or Chromebook?

A: A COS Service Device (COS - SD) is used primarily to cache and manage test content. For various reasons, tablet devices (such as iPads) and Chromebooks do not provide a suitable environment for a COS - SD. As a result, you must install the COS - SD software on a Windows, Mac (OS X or macOS), or Linux computer and connect to the COS - SD when you install DRC INSIGHT on the tablet device or Chromebook.

Q2. Can the DRC INSIGHT iPad App be distributed without an MDM as an .ipa file using iTunes or other software/methods?

A: Currently, the DRC INSIGHT App for iPads is available from the Apple App Store.

Q3. Does DRC recommend any particular version of Mobile Device Management (MDM) software?

A: No, there are many versions of MDM software, any of which will distribute DRC INSIGHT. To configure DRC INSIGHT using the MDM software, you must use a version that supports the Managed App Configuration feature.

Q4. Is an external keyboard required for testing with iPads?

A: No.

Q5. Is custom installation of the Apple virtual (internal) keyboard supported for testing?

A: Yes—the internal keyboard does not display automatically during testing, but can be toggled on using an iPad function key. Be sure that students are using only an English keyboard.

Chromebook Questions

Chromebooks can be a secure platform for administering student assessments. When set up properly, these devices meet K–12 education testing standards. If configured according to Google specifications, Chromebooks can be set to disable students' access to browse the web during an exam in addition to disabling external storage, screenshots, and the ability to print. Google provides scenarios for setting up Chromebooks for secure assessment, detailed at the link below:

<https://support.google.com/chrome/a/answer/3273084?hl=en>

If you need help setting up your Google Administrator account or enrolling Chromebooks, please contact Google directly.

Q1. Of the secure testing scenarios provided by Google, which one did DRC select and why?

A: DRC developed the Chromebook DRC INSIGHT application to meet the specifications of Google's Scenario 1 for delivery of secure assessments. Although each scenario prepares a Chromebook for secure testing, DRC selected Scenario 1 where the student takes an exam on the Chromebook using the DRC INSIGHT App in Single App Kiosk Mode. While the student tests, the DRC INSIGHT App runs in a secure, full-screen mode. After the student exits the test, the Chromebook device can be used for any purpose, secure or otherwise—the Chromebook is only secured during testing with the DRC INSIGHT App.

Scenario 1

DRC specifically selected Scenario 1 because:

- It is the only scenario that allows for fully secure assessment delivery (Single App Kiosk Mode).
- It allows the DRC INSIGHT App to communicate securely with a COS Service Device.
- It does not require locking down the device and dedicating it for assessment purposes. Students can use the Chromebook for other purposes when the DRC INSIGHT App is not being used for testing.
- It provides students a full-screen environment (the only scenario that does).

Scenario 2

In contrast, Google's Scenario 2 includes a restricted sign-in feature for secure assessment delivery, which assumes that the Chromebook will be used solely for testing purposes. When this feature is enabled, non-assessment sign on is not allowed. When this feature is not enabled, test administrators must maintain separate student profiles—assessment and non-assessment—to allow for additional restrictions needed during assessment sessions.

Scenario 2 requires a higher level of administration oversight (for example, creating accounts twice). And, it requires manual management of security permissions making it prone to user error that is difficult to detect. It also requires taking the test in the Chrome browser, or manually launching a non-kiosk application (essentially launching the user into a desktop session where they have access to one URL). Finally, the Chromebook device must be cleared of data (wiped) upon exiting the test.

Chromebook Questions (cont.)

Q2. Does DRC require users to log in to each Chromebook and write down the Device ID?

A: No. For unregistered Chromebooks, use COS to create DRC ORG Units, download the configuration file (.zip) using Chrome device management, and upload the chromeos.json file from the configuration file using Chrome device management. When the user starts the DRC INSIGHT App on the Chromebook, the Chromebook will be registered.

For Chromebooks that are already registered with COS, if the COS Configurations and Device IDs are still applicable, when DRC INSIGHT is launched it will locate the Device ID from COS and use the associated COS Configuration.

Note: The System Readiness Check (available through a link on the DRC INSIGHT App main testing page) displays the Device ID on the System Information page.

Q3. Why does DRC require Google Apps for Education and the Google Administrator accounts?

A: The DRC INSIGHT Chrome App requires Single App Kiosk mode to launch and ensure a secure testing environment on Chrome devices. Google Apps for Education and Chrome device management allow Chrome administrators to manage kiosk apps for multiple Chrome devices from a central console. This is the best approach to managing these devices in terms of efficiency and security.

DRC assumes that users have registered their Chromebooks as part of the initial implementation. Google specifies two additional requirements for secure testing using any of the three scenarios described in Q1:

- Google administrators must use Chrome device management to manage their Chrome devices from a single location.
- Google administrators must enroll each device in the school's domain.

Q4. How is installing DRC INSIGHT different than installing other testing applications that districts may be using?

A: The DRC INSIGHT Chromebook App is configured to be secure and deployed using Chrome device management and configured to work with the COS - SD using the COS Configuration. For a different application, the process would not necessarily use a secure App or a COS - SD. These processes rely on Chromebook user account or other settings to restrict access. Since there is no secure testing App for the Chromebook, these processes require a workaround to secure the testing sessions.

Q5. Does the deployment or installation of DRC INSIGHT require the Chromebooks to be dedicated to testing for the duration of the assessment window?

A: No, the Chromebook device is not dedicated to testing, but the secure DRC INSIGHT App is. The DRC INSIGHT App is the secure testing environment that the student accesses using a unique test ticket. After a student has finished a test and exits the DRC INSIGHT App, the student can execute other applications and use the Chromebook for other purposes. Test Administrators are responsible for monitoring testing and ensuring students are properly ending and submitting their tests.

Chromebook Questions (cont.)

Q6. Does Google provide a method to mass deploy secure testing configurations to Chromebooks?

A: Yes, Google has a feature that allows users to “push” a secure testing configuration using Chrome device management.

Q7. How do I configure Chromebooks to work with DRC INSIGHT?

A: DRC provides COS to configure and manage your Chromebooks after you have registered them in your Chrome domain.

Q8. Can I use DRC INSIGHT on a touch-enabled Chromebook?

A: Yes, DRC supports certain touch-enabled devices (see the latest version of the *DRC INSIGHT Online Learning System Supported System Requirements*).

General Hints and Tips

The following are hints and tips for testing with iPad and Chromebook devices.

- Be sure to have a strong network connection, either Wi-Fi or direct Internet connectivity.
- Make sure the device's keyboard is set to US English.
- Make sure the devices are either fully charged or plugged in.
- Note that an optical drive is not required.
- Note that while you are running the DRC INSIGHT application, the system operates in Single App Kiosk Mode.
- Remember that DRC INSIGHT displays in landscape mode only.

iPad Hints and Tips

- Use the following finger tap/press to navigate DRC INSIGHT—**Show Version** = two fingers plus three taps.
- For calculators, click the **OK** button versus the Return key. Using the Return key on your keyboard will not work as an 'Enter' function.
- All iPad devices have a Sleep Mode setting. In Sleep Mode the screen goes black and users can touch any key to re-activate it, or press their home key and type in the device passcode (if applicable). The DRC INSIGHT timeout warning is not visible when an iPad is in Sleep Mode. To disable Sleep Mode, select **Settings-General-Auto-Lock** and select **Never**.

Note: School iPad profiles may not permit you to set this to Never.

- Smaller graphing and dragging elements may be difficult to track because the user's finger covers the item.
- The pinch-to-zoom in/out iOS gesture is supported; the swipe iOS gesture is not supported.
- The internal keyboard will not display during test execution. You can toggle it on using the appropriate iPad function key.
- The Audio starting point does not turn red when your finger gets close to touching it.

Chromebook Hints and Tips

- You must enroll a Chromebook in your Google domain account before using it with DRC INSIGHT. As part of the enrollment process, Google uses the concept of ORG Units. These are not the same ORG Units that DRC uses in COS.

To prepare for the Chromebook administration, please ensure that you have enrolled all of your Chromebooks in the Google Device Manager software. This software helps you manage your device configurations.

For more information about managing Chromebooks and setting up your basic Chromebook environment, see the topic https://support.google.com/chrome/a/answer/1289314?hl=en&ref_topic=2935995.

If you need help setting up your Google Administrator account or enrolling Chromebooks, please contact Google directly.

- COS manages the DRC INSIGHT portion of the Chromebook device configuration process.
- When you use COS to create DRC ORG Units and group Chromebooks, DRC assigns each Chromebook a Device ID. This Device ID is different than the serial number of the Chromebook.
 - Google uses the Chromebook's serial number to enroll the Chromebook in the Google domain.
 - DRC uses the Chromebook's Device ID to register the Chromebook in a DRC ORG Unit.

To help manage and organize your Chromebooks, keep track of the current Device ID.

- On your Chromebook, do not log in to your Google account if you want to access DRC INSIGHT. Because DRC INSIGHT runs in Single App Kiosk Mode, you cannot access it after you have logged in to a Google account. If you attempt to start the DRC INSIGHT App, an error message displays indicating that you are not in Single App Kiosk Mode. To access DRC INSIGHT, log out of your Google account and start the DRC INSIGHT App.

Google/Chromebook Plug-In Error

When students test using Chromebooks, the process generates communications to both Google Chrome and to DRC. When a student launches the DRC INSIGHT app on the day of testing, DRC INSIGHT attempts to reach Google Chrome to generate a new instance of DRC INSIGHT on the Chromebook. If the communication to Google times out before this happens, a plug-in error occurs.

Districts with complex content filters, peer-to-peer networking, or deep packet inspection of Internet traffic in their network may have extra filtering, which can delay the communication to Google on the initial launch of DRC INSIGHT and cause a plug-in error.

If your site experiences a Google plug-in error while testing with Chromebooks, you can use the following information to troubleshoot the process.

Basic Steps

- B1.** Reboot the device
- B2.** Wait for/confirm that you have a solid Internet connection
- B3.** Wait 30 seconds and reopen DRC INSIGHT

Intermediate Steps

- I1.** Check the speedtest at betaspeedtest.net
- I2.** Check your whitelisting
- I3.** Check your access point-to-student ratio
- I4.** Verify how the school's WiFi policy handles "guest" (kiosk mode) Chromebook traffic
- I5.** Check the connection type in Google Admin for "Direct Connection"

Advanced Steps

- A1.** Check the content filter settings:
 - SonicWall and SmoothWall: Disable **Deep Packet Inspection through SSL**
 - LiteSpeed: Disable **Decrypt SSL**
 - iBOSS: Add Chromebook kiosk user exceptions. Can iBOSS whitelist URLs? If not, can iBOSS be disabled?
- A2.** Check the access point brand. If Cisco Meraki, disable layer 7 p2p filtering.



Error Messages

What's Covered in This Section

This section describes the more common error messages you may encounter while installing, configuring, and using DRC INSIGHT, Central Office Services (COS), and COS Service Devices (COS - SDs). It also provides recommendations to resolve them.

For many messages, there are references to a more detailed description of how to resolve the error.

Message: A Communication System Error has Occurred

Please raise your hand and wait for help.

A system error has occurred. Please contact DRC Customer support for assistance. Customer Support will request the information that is displayed when you click Details. You can copy this information and send it to DRC.

When you are ready, click OK to close this message.

Description: A system communication error occurred while a student was testing in DRC INSIGHT.

What Should I Do? Contact DRC Customer Support. If requested, click Details to display the troubleshooting details about this message. DRC Customer Support may request that you send this information to DRC.

Message: Chromium OS version `xxxx.xx.x` is not supported by DRC INSIGHT

The version of the operating system on this testing device is not supported by the DRC INSIGHT team.

Description: DRC INSIGHT cannot use the version of Chrome OS.

What Should I Do? Update the Chrome OS browser to version 74 or higher.

Message: Configuration Error

Contact your technical resource and provide them with the following information: DRC INSIGHT cannot retrieve the configuration profile associated with this device because a device can only be actively assigned to one Device Toolkit ORG Unit for a testing program.

Description: COS is unable to uniquely identify the device because more than one ORG Unit ID exists for the device within the same testing program.

What Should I Do? Verify that the device has been assigned to only one ORG Unit per testing program on the device (see [COS Online Help](#)).

Message: Configuration Not Found

Contact your technical resource and provide them with the following information: DRC INSIGHT cannot retrieve the configuration profile associated with this device because it cannot find the Device Toolkit ORG Unit ID which was entered incorrectly, was deleted, or was not assigned to the device.

Description: One of the following situations has occurred:

- The COS ORG Unit was deleted after the device was assigned to it.
- The COS ORG Unit ID was not uploaded.
- The COS ORG Unit ID was entered incorrectly.
- The COS ORG Unit ID was not set up in Chrome Management (or in a Mobile Device Management [MDM] solution).

What Should I Do? Verify that the device has been assigned to a COS Configuration in COS and that the ORG Unit ID has been uploaded to this device. After you have the correct ORG Unit information, click **Assign Device to ORG Unit** and enter the correct ORG Unit ID (see [COS Online Help](#)).

Message: Connection Error

This computer cannot connect to the local Content Management and/or content Hosting server(s). The connection or the content must be restored before the user can continue testing. If this is the first time you are seeing this message, please try connecting again. Please contact your local IT staff to verify network and local Content Management and/or content Hosting server(s) are working. They can contact DRC Customer Support if they need additional help to resolve the matter.

Description: The testing client is not able to connect to the COS - SD. This connection error occurred while trying to login.

What Should I Do? Verify that you can reach the COS - SD. If the issue persists check your COS - SD's firewall and the whitelisting on your firewall, content filter, proxies and other network devices.

Message: Connection Error Retrieving Content

This computer cannot connect to the server to retrieve content. The connection or the content must be restored before the student can continue testing. Please contact your local IT staff to verify that the network connection is working. They can contact DRC Customer Support if they need additional help to resolve the matter.

Description: The testing client is not able to connect and download the test form from the COS - SD. This connection error occurred while trying to download the form.

What Should I Do? Verify that all the forms are up to date and that the testing client can reach the COS - SD.

Message: Connection Error Retrieving Content

Please contact your local IT staff to verify network connection is working. They can contact DRC Customer Support if they need additional help to resolve the matter.

Description: The testing client is not able to connect and download the test form from DRC. This connection error occurred while the client was trying to download the form.

What Should I Do? If the issue persists check your whitelisting on your network devices and prioritize testing traffic. If possible allow testing traffic to bypass as many network devices as possible. Ensure that bandwidth is not being completely consumed. If you are using an COS - SD, verify the whitelisting and firewalls to and on the COS - SD (see *Volume I: Introduction to Online Testing*).

Message: Connection Retry is in Progress

You are experiencing a temporary network connectivity issue. The system is attempting to reconnect.

If the system reconnects, this message closes and you can continue testing. If the system cannot reconnect, the message closes, an Internet Connection Error message displays, and you have to exit DRC INSIGHT.

If you want to exit the test now, select the **Exit the Test** button.

Description: The connection necessary to transmit test response has been lost during testing. For the next five minutes, while this message is displayed, DRC INSIGHT will attempt to restore contact with the DRC servers and send the test response. During this time, if a connection is re-established, the message will close and the tester can continue testing. If a connection is not re-established during this time, the message will close and the Internet Connection Error message will display. At any time during the five-minute interval, the test proctor can click **Exit the Test** to temporarily end testing for the tester.

What Should I Do?

- If the message disappears and no Internet Connection Error message displays, you do not need to do anything—the tester can resume testing.
- If the message disappears and the Internet Connection Error message displays, the tester must discontinue testing, exit DRC INSIGHT, and can resume testing on a different testing device (see the “Internet Connection Error” message).
- If you click **Exit the Test** while the Network Connectivity Issue message is displayed, the test ends and the tester must re-enter the test. All of their testing information will be saved and the tester can resume testing using the same testing device at the same point in the test.

Message: Could Not Retrieve Testing Information

Possible connection error while attempting to retrieve device configuration.

Description: DRC INSIGHT is unable to determine the identity of the device.

What Should I Do? Check your network connection and retry. Verify that the device is registered in COS (see [COS Online Help](#)).

Message: Device Registration

A device cannot be actively registered to more than one Device Toolkit ORG Unit for the same testing program.

Description: COS is unable to uniquely identify the device because more than one ORG Unit ID exists for the device within the same testing program.

What Should I Do? Verify that the device has been assigned to only one ORG Unit per testing program in the COS Configuration and that one or more ORG Unit IDs have been uploaded to this device. After you have the correct ORG Unit information, click **Assign Device to ORG Unit** and enter the correct ORG Unit ID (see [COS Online Help](#)).

Message: Download Of Upgrade Failed

Your upgrade failed because the download was unsuccessful.

Description: The testing client tried to upgrade but was unable to download the update.

What Should I Do? Try one or more of the following actions:

- Retry the update.
 - Verify your whitelisting settings.
 - Manually update the testing client.
-
-

Message: Failed to Load Device Information

A communication error occurred. Click Reload to try again or Cancel to cancel the process.

Description: Because of a network communication error, the device information was not loaded from COS.

What Should I Do? Wait a few seconds and click **Reload** to retry the process. If the network problems persist, click **Cancel** and contact your network administrator (or try again later).

Message: Guided Access Is Not Enabled

Please raise your hand and wait for help.

Description: Guided Access is either not set up or not working on the iPad device.

What Should I Do? Try starting Guided Access on the iPad device (see *Volume III: DRC INSIGHT*).

Message: Internet Connection Error

There has been an interruption in Internet connection. The student may be moved to another computer to continue testing. If this error persists, contact your local IT staff to verify network and Internet connections are working. They can contact DRC Customer Support if they need additional help to resolve the matter.

Description: There was an interruption in the Internet connection and the testing client was unable to reach DRC.

What Should I Do? Click **OK** to close DRC INSIGHT. Move the student to a different testing device to continue testing. If the issue persists, check whitelisting on your network devices and prioritize testing traffic. Allow testing traffic to bypass as many network devices as possible. Ensure that the bandwidth is not being completely consumed.

Message: *Operating System version is not supported by DRC INSIGHT*

Please raise your hand and wait for help.

This version of the operating system on this testing device is not supported by the DRC INSIGHT team. Please contact DRC Customer Support if you have questions. Select Exit to return to the Test Sign In page.

Description: DRC INSIGHT will not work with the version of the operating system that is currently installed on the testing device.

What Should I Do? Install a supported version of the operating system or select a different testing device on which to test.

Message: Registration Failed

The registration was unsuccessful

The registration failed because the Device Toolkit ORG Unit ID does not exist. Click Back to re-enter the ORG Unit ID.

Description: DRC INSIGHT was unable to register the device because it could not find the device's COS ORG Unit ID.

What Should I Do? Verify that you have the correct ORG Unit ID for the device, click **Back**, and re-enter the ORG Unit ID.

Error Messages

Message: Session Ended

Another session has been activated with this student's login. Please confirm the student is using their assigned login. If the student is actively testing on another computer, click OK. Please contact DRC Customer Support if you need additional help to resolve this matter.

Description: Someone else has logged in with the same credentials on another computer.

What Should I Do? Verify that the student is using the correct testing credentials and that another student is not using them and have the student log in again.

Message: Session Inactive. Please raise your hand and wait for help.

Your session has been ended due to inactivity. Any test responses you submitted will be stored. Click OK to return to the log-in page.

Description: The student's test session ended due to inactivity.

What Should I Do? If the student needs to continue testing, have them click OK to return to the log-in page and log in again using his or her log-in credentials.

Message: Session Status Outside Window

Testing is currently unavailable. Please contact an administrator.

Description: The test ticket that is being used to log in to the test is in a test session for which the window is not active.

What Should I Do? Move the student to a test session in an appropriate testing window.

Message: The device's operating system has been updated and is in the process of being certified by DRC.

The DRC INSIGHT application should perform as intended, but if you have questions, please contact your Technology Coordinator.

This device is using OS version xxxxx

Description: The operating system on the testing device is valid, but the version or level of the operating system has not been fully tested by DRC.

What Should I Do? You are allowed to test with this version, but DRC recommends that you use a fully tested and supported level of the operating system.

Message: Your Client Attempted To Access An Invalid URL

Your session has been ended because your client tried to access an unsupported address.

Please click the OK button to proceed.

Description: The client is pointed to the wrong URL.

What Should I Do? The issue is often caused by incorrect forwarding by either the router DNS or the ISP. For the correct URLs, refer to *Volume I: Introduction to Online Testing*.

Message: Your Client Failed The Readiness Check

Your session has been ended because your client is not supported. Please click the OK button to proceed. It is possible that the browser that you are using is unsupported. Please download the latest version of Chrome.

Description: The testing client has failed a System Readiness Check test.

What Should I Do? Use the System Readiness Check to see which test failed and fix the issue. This error can be caused by issues such as an invalid operating system or incorrect screen resolution.

Message: Your Client Is Out Of Date

Your session has been ended because your client is out of date. We will now attempt an upgrade.

Description: The testing client is out of date. If Auto Update is enabled, it will now run.

What Should I Do? If you enabled Auto Update, it will run now. Otherwise, enable and run Auto Update, or install the update manually.

Message: Your Client Is Out Of Date

Your session has ended because your client is out of date. The latest version must be downloaded prior to students testing.

Description: The testing client is out of date. Auto Update is not enabled, so you must update the testing client manually.

What Should I Do? You did not enable Automatic Updates. Enable and run Automatic Updates or install the update (upgrade) manually.

Message: Your Device Has Not Been Registered

The Chromebook device was already registered in the DRC INSIGHT Device Toolkit.

Description: Because the Google Admin Console setting for Erase all local user info, settings, and state after sign-out was accidentally set to Erase all local user data after each sign-out, the Chromebook was registered successfully, but the registration was lost/deleted when the Chromebook was restarted.

What Should I Do? Verify that the setting for Erase all local user info, settings, and state after sign-out in the Google Admin Console is set to Do not erase all local user data (see below).

User Data 
Locally applied

Erase all local user info, settings, and state after each sign-out

Do not erase all local user data ▼

Message: Your Testing Session Has Been Stopped

The testing session has been terminated due to inactivity. Please close all other applications or browser sessions that may be open and re-log in to the test.

Description: The DRC INSIGHT Test Engine monitors whether a tester leaves the secure testing experience of the DRC INSIGHT Secure Browser without exiting the test normally. If a tester leaves the test environment outside of the normal and allowed methods, this error message displays and the tester's test session is closed. For example, if a tester attempts to open a virtual desktop or to toggle to one during a test, the DRC INSIGHT Secure Browser will detect this activity and end their test session. At the same time, the DRC INSIGHT Test Engine logs events to record this situation.

What Should I Do? Determine what caused this message to display and shut down or remove access to any applications or browser sessions that the tester may have been able to access during their test session. If necessary, move the tester to a different testing device. The tester must log in again to continue testing.

Notes



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