

Technology User Guide Volume V: Troubleshooting

South Carolina

Data Recognition Corporation (DRC) 13490 Bass Lake Road Maple Grove, MN 55311

Toll Free: 1-800-451-7834 eDIRECT: https://sc.drcedirect.com Email: SCProject@datarecognitioncorp.com Revision Date: October 17, 2017

COPYRIGHT Copyright © 2017 Data Recognition Corporation

The following items in DRC INSIGHT are protected by copyright law:

- The User Guide.
- All text and titles on the software's entry and display, including the look and feel of the interaction of the windows, supporting menus, pop-up windows, and layout.

DRC INSIGHT Online Learning System and DRC eDIRECT are trademarked by Data Recognition Corporation.

Any individuals or corporations who violate these copyrights and trademarks will be prosecuted under both criminal and civil laws, and any resulting products will be required to be withdrawn from the marketplace.

The following are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries:

Internet Explorer Microsoft Windows Windows Vista Windows XP Windows 7 Windows 8 Windows 10

The following are trademarks or registered trademarks of Apple Corporation in the United States and/or other countries:

Apple Macintosh Mac OS X and macOS iPad iOS* *iOS is a trademark or registered trademark of Cisco in the U.S. and other countries and is used under license. Safari

The following are trademarks or registered trademarks of Google Corporation in the United States and/or other countries.

Android Chrome Chromebook Google Play

The following is a trademark or registered trademark of Mozilla Corporation in the United States and/or other countries.

Firefox

Introduction	About This Guide	6		
	What's Covered in This User Guide	6		
Working with	What's Covered in This Section			
INSIGHT	Online Tools Training (OTT)	8		
	The Monitor Verification Test	8		
	The Capacity Estimator	8		
	Online Tools Training (OTT)	9		
	The Monitor Verification Test	10		
	Changing the Monitor's Contrast or Brightness	11		
■ FAOs Hints	What's Covered in This Section			
and Tine	General Questions	14		
and rips	Common Technical Questions and Answers	17		
	Question: How do I update test forms in a TSM?	17		
	Question: Can we mass deploy test software			
	to all student computers?	18		
	Load Simulation Testing Questions	20		
	iPad Questions	22		
	Chromebook Questions	23		
	Android Questions	27		
	General Hints and Tips			
	iPad Hints and Tips			
	Chromebook Hints and Tips	29		
	Google/Chromebook Plug-In Error			
	Android Hints and Tips			
	Google Play for Education			

Contents

	Error	What's Covered in This Section	33
Messages Message: A Communication		Message: A Communication System Error has Occurred	34
	messages	Message: Chromium OS version xxxx.xx.x is not	
		supported by DRC INSIGHT	34
		Message: Configuration Error	34
		Message: Configuration Not Found	35
		Message: Connection Error Retrieving Content	35
		Message: Could Not Retrieve Testing Information	36
		Message: Device Registration	36
		Message: Download Of Upgrade Failed	36
		Message: Failed to Load Device Information	36
		Message: Guided Access Is Not Enabled	37
		Message: Internet Connection Error	37
		Message: No TSM Configured	37
		Message: Operating System version is not	
		supported by DRC INSIGHT	37
		Message: Registration Failed	38
		Message: Session Ended	38
		Message: Session Inactive. Please raise your hand and wait for help	38
		Message: Session Status Outside Window	38
		Message: Test Exit! Response Stored on TSM	39
		Message: Test Version Error	39
		Message: Test Version Error	39
		Message: The device's operating system has been updated	
		and is in the process of being certified by DRC	39
		Message: TSM Connection Error Could Not Register TSM	40
		Message: TSM Connection Error During Login	40
		Message: TSM Connection Error Responses May Be Stored	40
		Message: TSM Connection Error Retrieving Content	41
		Message: TSM Content Caching Configuration Error	41
		Message: TSM Content Caching Error	41
		Message: TSM Version Error	42
		Message: Your Client Attempted To Access An Invalid URL	42
		Message: Your Client Failed The Readiness Check	42
		Message: Your Client Is Out Of Date	42
		Message: Your Client Is Out Of Date	43
		Message: Your Device Has Not Been Registered	43



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, or DRC INSIGHT. This volume, <i>Volume V: Troubleshooting</i> , describes tools and testing information to help you troubleshoot your testing environment and verify that it is ready for testing.
What's Covered in This User Guide	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 the Testing Site Manager (TSM), the Central Office Services - Device Toolkit, and INSIGHT, and it provides information to help resolve them.
Important Information	Important: Throughout this user guide, the Information icon ((1)) indicates important information or crucial tips.

Working with INSIGHT

Working with INSIGHT

- What's Covered in This Section
- Online Tools Training (OTT)
- The Monitor Verification Test

This section describes the Online Tools Training (OTT) and the Monitor Verification Test, two tools that you can use to help prepare for and become familiar with the online testing environment.

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

This topic describes the Monitor Verification test, available in eDIRECT, 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.

District Test Coordinators, School Test Coordinators, Test Administrators, and Technology Coordinators 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.

Note: An OTT, especially an OTT with an accommodation (such as HVA or VSL) is a good way to determine that INSIGHT is properly installed and configured with a TSM.

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 INSIGHT App.
 - From a Chromebook device, click on the INSIGHT App.
 - From an Android device App drawer, press **DRC INSIGHT** to start the INSIGHT App.
- 2. When 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 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 using eDIRECT by opening the **All Applications** menu bar, selecting **General Information–Downloads**, and clicking the **Monitor Setting Verification** button.



Verification button on the Downloads tab to display the Monitor Setting Verification window.

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)

Note: You also can change the contrast by selecting **System Preference–Universal Access** (Mac 10.6) or **System Preferences–Accessibility–Monitor** (Mac OS 10.8) and use the Change the Contrast slider.

iPad or Android Devices

For iPad or Android devices, refer to your iPad or Android 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 Testing Site Manager (TSM) software. The questions and answers are technical in nature and cover the following environments:

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

FAQs

■ General Questions	Q1:	Is the TSM in the Mac environment a true service that runs when no one is logged in to the server?	
	A:	It is a true service—it runs using the "Launchd" capability of OS X.	
	Q2:	If our TSM "goes down" or is unavailable, will a test automatically bypass the TSM, or are we stuck until the TSM is running again?	
	A:	If the TSM goes down, testing stops. If the computers are configured to use a TSM, the TSM must be available.	
	Q3:	Is there a way to provide failover TSM service? Or a quick way to redirect service if a server fails during the testing window?	
	A:	Because the TSM is configured using Central Office Services - Device Toolkit configurations, it is possible to quickly switch TSMs if necessary. To do so, specify the location to the new TSM in the configuration using the Central Office Services - Device Toolkit and restart INSIGHT on the device. When it starts, INSIGHT automatically uses the new TSM configuration.	
	Q4:	Do we use an .msi file for installation?	
	A:	The INSIGHT and TSM installation file types vary by operating system:	
		• The Windows version uses an .exe file for the TSM and an .msi file for INSIGHT.	
		• The Mac (OS X or macOS) version uses a .dmg file for the TSM and a .pkg file for INSIGHT.	
		• The iOS version uses an App Store app and a .plist file for INSIGHT.	
		• For Chrome, the INSIGHT App ID and URL is contained in a .txt file.	
		• The Android version uses an .apk file for INSIGHT.	

General Questions (cont.)

Q5: I tried removing the TSM and reinstalling it, but now I can't seem to use it? A: Verify that the uninstallation process removed the TSM installation folder. On a Windows 7 machine (64-bit), the folder is CVProgram Files (v8C)/TestingSiteMension A features.

- is C:\Program Files (x86)\TestingSiteManager. After you remove the TSM, if this folder still exists, delete it before you reinstall the TSM.
- Q6: Do we have to have a TSM server 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 TSM server you can offload about 50% of the traffic from the Internet to your TSM.

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

Q7: 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 device in the Central Office Services - Device Toolkit (see *Volume III: Configuring Devices for Testing*). After installation, INSIGHT automatically checks for software updates and installs them whenever it is launched.

Q8: How are test responses received?

A: It depends on whether a TSM is installed and configured for content caching. If a TSM is installed and configured for content caching, the students log in first. INSIGHT always contacts DRC to log in. After students log in, they download the test from the TSM and send test responses directly to DRC.

There is no TSM installed

The student logs in by connecting with DRC. Tests are sent directly from DRC and responses are sent directly to DRC. If there is an Internet connectivity problem, the student is unable to continue testing.

FAQs

■ General	Q9.	How do I test that a TSM is working?
Questions	A:	Start the System Readiness Check on a testing computer.
(cont.)		To confirm that the TSM is being used, do the following:
		1. Verify that the TSM settings are showing up in the System Readiness Check.
		2. Click Execute Tests in the System Readiness Check.
		3. For content caching, check the results for Content Caching TSM Connection, Content Caching TSM Status, and Content Caching TSM Version.
		These results tell you whether the testing client is set up correctly to work with a TSM. Verify that a TSM is being used and check the test details for more information.
		4. Click the desktop shortcut for DRC Online Assessments , select Online Tools Training , sign in, and take a training test to verify that you can connect to the TSM.
	Q10	. Can we install 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 INSIGHT is installed on each computer that will be used for testing. Any other configuration is unsupported and may produce unexpected results.
	Q11.	. The sound for Human Voice Audio (HVA) does not work. What should I do?
	A:	Run the System Readiness Checks and verify that the sound (Audio Capability) is working (see <i>Resolving System Readiness Required Tests</i> in <i>Volume IV: DRC INSIGHT</i>). Adjust the volume before testing.

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 in a TSM?

To update your test forms, do the following:

1. Open the TSM by pasting the following URL into a browser:

http://localhost:8080/

Note: The string **localhost** only works in this URL if you are using a browser on the computer where the TSM is installed. To access the TSM remotely, change **localhost** to the IP address or server name of the computer where the TSM is installed.

- 2. Select any applicable optional media files, audio (HVA and/or TTS) and/or video (VSL), that need to be updated.
 - a. If you have students that require an audio accommodation, check the applicable checkbox: Download HVA and/or Download TTS.
 - b. If you have students testing with Video Sign Language (VSL), check the Download VSL checkbox.

Note: When you check one or more of these checkboxes, a large amount of audio and/or video files will be downloaded. If no student testing requires one of these accommodations, do not check the checkboxes.

3. If the status of any content changes to Out of Date, click the Update Content button.

Note: When an update starts, the Content Update page displays information regarding the update process. After you read the information, click **OK**. It can take a while for the TSM to update, and during the update, a progress bar displays to indicate the status of the update. Wait for the screen to refresh and all of the content to display the status **Up to Date**.

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:

http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=3138

After installing the Windows SDK Components for Windows Installer Developers, 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.

DRC_INSIGHT_Setup.msi - I	Orca			c. E.	- 28
File Edit Tables Transfor	m T	ools View Help			_
	4 9				
Tables		Property	Value		
Error		ButtonText_Cancel	Cancel		
EventMapping		ButtonText_Decline	&Decline		
Feature		ButtonText_Exit	&Exit		
FeatureComponents		ButtonText_Finish	8cFinish		
File		ButtonText_Ignore	&/gnore		
Icon		ButtonText_Install	8dinstall		
IniFile		ButtonText_Next	&Next >		
InstallExecuteSequence		ButtonText_No	&No		
InstallUISequence		ButtonText_OK	OK		100
LaunchCondition		ButtonText_Remove	SkRemove		
ListBox		ButtonText_Repair	&Repair		
ListView		ButtonText_Reset	&Reset.		
LockPermissions	138	ButtonText_Resume	&Resume		
Media		ButtonText_Retry	&Retry		
MsiDigitalCertificate		ButtonText Return	&Return		
MsiPatchCertificate		ButtonText Yes	8/Yes		
Patch		CONTENTCACHE			
PatchPackage		CONTENTCACHEENABLE	false		
Property		CTRLS	Z		
RadioButton		CompleteSetupIcon	completi		
RegLocator	#	CtrlEvtChanging	Changing		
Registry		CtrlEvtRemoving	Removing		
RemoveFile		CtrlEvtRepairing	Repairing		
Shortcut		CtrlEvtchanges	changes		
Signature		CtrlEvtremoves	removes		
TextStyle		CtrlEvtrepairs	repairs		
Ullet		CustomSetupIcon	custicon		
Upgrade		DESKTOPHOVER	DRC INSIGHT		
Validation		DESKTOPNAME	WA Online Assessments		
Tables: 51	131	Property - 123 rows	ini i	No column is selected	

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.

ouIds

The alphanumeric ORG Unit ID generated by the Central Office Services - Device Toolkit.

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 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 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.

FAQs

Load Simulation Testing Questions

Q1: What is the Load Simulation Tool?

A: It's a software tool that Technology Coordinators can use to perform load simulations that help estimate the amount of time it will take to download tests and upload responses.

(!) Important: Enable load simulations only when you are actually conducting a load simulation test using a TSM and a set of student testing devices. Prior to actual student testing (when students are logging in and taking tests), disable load simulations for the TSM (see *Working with Locations* in *Volume III: Configuring Devices for Testing* for more information).

- Q2: How many testing devices should we use for a simulation? Can we use just one?
- A: DRC recommends that you include all of the schools and all of the computer labs that will perform online testing.

() **Important:** For a load simulation test, limit the number of testing devices per TSM to 100. Attempting to perform a load simulation test with more than 100 devices per TSM may cause the TSM to become unresponsive. You may have to uninstall and reinstall the TSM.

Q3: How many times should I run the simulation?

A: DRC recommends that you run the simulation three times during your load simulation testing. Run it twice specifying the TSM as the source for form content and once specifying DRC as the source for form content (see *Volume II: Testing Site Manager [TSM]*).

Q4: What metrics are reported?

A: A load simulation test reports the following for each testing device:

- The source for the content: TSM, DRC, or the client computer (based on configuration)
- The amount of time it took to load the test to the testing device, on average.
- The time it took to submit the result to DRC.
- The combined time for the load test and submit result.

For more information and a description of the summary results, see *Volume II: Testing Site Manager (TSM)*.

Load Simulation Testing Questions (cont.)

Q5: What are acceptable results for test load and response times?

A: As a result of the Technology Readiness Assessments that DRC has performed, we suggest that the test load time should be less than 60 seconds. We also suggest that the Avg Submit Test time on the load simulation test should be less than 60 seconds. This value is a combined time that factors in the time required to submit each test response, the wait time between each test question, and the time required for the final test submission.

For a description of all summary results, see *Analyzing Load Simulation Results* in *Volume II: Testing Site Manager (TSM)*.

Districts should analyze their results to determine acceptable response times for their students. If necessary, districts can adjust technical configurations and/or the number of students testing at one time.

	<u> </u>		
IPad Questions	Q1:	Do I install a TSM on an iPad or Chromebook?	
	A:	A TSM is used primarily to cache and manage test content and responses. For various reasons, tablet devices (such as iPads) and Chromebooks do not provide a suitable environment for a TSM. As a result, you must install the TSM software on a Windows PC or Mac (OS X or macOS) computer and connect to the TSM when you install 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 INSIGHT. To configure INSIGHT using the MDM software, you must use a version that supports the Managed App Configuration feature (originated in iOS 7).	
	Q4:	: Is iOS 9.3 supported?	
	A:	No-support was discontinued in July of 2017.	
	Q5:	Is an external keyboard required for testing with iPads?	
	A:	No.	
	Q6:	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. If you are testing with iOS 8 or higher 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 three 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 three secure testing scenarios provided by Google, which one did DRC select and why?

A: DRC developed the Chromebook 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 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.

<u>Scenario 1</u>

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 the TSM.
- It does not require locking down the device and dedicating it for assessment purposes. Students can use the Chromebook for other purposes when the INSIGHT App is not being used for testing.
- It provides students a full-screen environment (the only scenario that does).

Chromebook Questions (cont.)

<u>Scenario 2</u>

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.

<u>Scenario 3</u>

In Scenario 3, Google's Public Session Kiosk Mode is used to limit user access to non-assessment-related features of the Chrome OS operating system. Using Scenario 3 negates the possibility of TSM integration and secure content delivery due to known conflicts with Chrome packaged Apps. In addition, there are other considerations with Scenario 3:

- The URL and taskbar at the bottom of screen are visible. This consumes screen space and means the test engine must scale down the test content.
- Students can open additional Chrome windows.
- Students can use a command line shell that allows access to another machine.
- Students can close the Chrome window while the test engine is running, instead of using **Pause–Exit** or **Review–End Test-Exit**. This could mean lost test responses.

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 the Central Office Services - Device Toolkit 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 the Central Office Services - Device Toolkit, if the Central Office Services - Device Toolkit configurations and Device IDs are still applicable, when INSIGHT is launched it will locate the Device ID from the Central Office Services - Device Toolkit and use the associated 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.

FAQs

Chromebook Questions (cont.)

- 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 TSM using the Central Office Services - Device Toolkit. For a different application, the process would not necessarily use a secure App or a TSM. 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.

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 the Central Office Services - Device Toolkit that you can use 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. For a complete list of supported devices, see the latest version of the *DRC INSIGHT Online Learning System Supported System Requirements*.

Android Questions

Q1: What happens if my Android device is not pinned correctly?

A. When you start INSIGHT, if the Android device is enrolled in Google Play for Education (see the note), a **Use screen pinning?** prompt displays (see below).



You must touch START at the prompt to lock the Android device for testing. If you select NO THANKS, you will not be able to test.

Note: Android devices are no longer required to be enrolled in Google Play for Education to test with INSIGHT. You can continue to test with Android devices that are enrolled in Google Play for Education.

Q2: Can I use MDM software to deploy the INSIGHT software?

A. You can use MDM software to deploy your DRC INSIGHT Android software, but you must manually configure each Android device.

Hints and Tips

General Hints and Tips	The following are hints and tips for testing with iPad, Chromebook, and Android 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 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 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 the Central Office Services - Device Toolkit.

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.

- The Central Office Services Device Toolkit manages the INSIGHT portion of the Chromebook device configuration process.
- When you use the Central Office Services Device Toolkit 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 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 INSIGHT App, an error message displays indicating that you are not in Single App Kiosk Mode. To access INSIGHT, log out of your Google account and start the INSIGHT App.

Hints and Tips

When students test using Chromebooks, the process generates Google/ communications to both Google Chrome and to DRC. When a student Chromebook launches the INSIGHT app on the day of testing, INSIGHT attempts Plug-In Error to reach Google Chrome to generate a new instance of 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 INSIGHT and cause a plug-in error. If your site experiences a Goggle plug-in error while testing with Chromebooks, you can use the steps/questions listed below 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 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.

Ensure that the Android device is connected to the correct Wi-Fi Android Hints network. and Tips Ensure that the latest version of the DRC INSIGHT App is installed ٠ on each Android device. Ensure that all Android devices are fully charged or plugged in. ٠ Deactivate the Android Gesture Typing feature. ٠ https://support.google.com/nexus/answer/2811346?hl=en • Deactivate the Android OK Google feature if it is on (the default value is off). http://forums.androidcentral.com/motorola-droid-mini/448925how-do-you-turn-off-ok-google-now.html Make sure that your Android device allows App installs from unknown sources. http://www.androidcentral.com/allow-app-installs-unknownsources The Central Office Services - Device Toolkit manages the INSIGHT • portion of the Android device configuration process. If you are using an Android device that is enrolled in Google Play for Google Play for Education, note the following items. Education If you start a test in INSIGHT using an Android device that is not pinned correctly, a Use screen pinning? prompt displays. You must touch START at the prompt to lock the Android device for testing. If you select NO THANKS, you will not be able to test. Use screen pinning? Screen pinning locks the display in a single view To unpity, touch and hold Back and Overview at the same time. NO THANKS START

• All Android devices enrolled in Google Play for Education should be "bumped" to ensure that INSIGHT launches in Pinned (secure) mode.

https://support.google.com/edu/android/answer/3434383?hl=en

Note: If an Android device was bumped before INSIGHT was installed, the device does not need to be bumped again

• Google Play for Education is neither required nor necessary for testing with INSIGHT on an Android device.

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, the Testing Site Manager (TSM), and the Central Office Services - Device Toolkit. It also provides recommendations to resolve them.

For some 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 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 58 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: The Central Office Services - Device Toolkit 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 *Volume III: Configuring Devices for Testing*).

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 Central Office Services Device Toolkit ORG Unit was deleted after the device was assigned to it.
- The Central Office Services Device Toolkit ORG Unit ID was not uploaded.
- The Central Office Services Device Toolkit ORG Unit ID was entered incorrectly.
- The Central Office Services Device Toolkit 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 configuration in the Central Office Services - Device Toolkit 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 *Volume III: Configuring Devices for Testing*).

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 a TSM, verify the whitelisting and firewalls to and on the TSM (see *Volume I: Introduction to Online Testing*). Perform a content recheck within the TSM to verify that all content downloaded.

Message: Could Not Retrieve Testing Information

Possible connection error while attempting to retrieve device configuration.

Description: 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 the Central Office Services - Device Toolkit (see *Volume III: Configuring Devices for Testing*).

Message: Device Registration

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

Description: The Central Office Services - Device Toolkit 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 Central Office Services - Device Toolkit 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 *Volume III: Configuring Devices for Testing*).

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 the Central Office Services - Device Toolkit.

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 IV: 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 or the TSM.

What Should I Do? 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 bandwidth is not being completely consumed.

Message: No TSM Configured

A TSM must be configured when using audio. Please contact an administrator.

Description: The testing client is trying to log in to an audio test that requires a TSM, but no TSM is configured.

What Should I Do? Connect the testing client to a TSM for content caching (see *Volume III: Configuring Devices for Testing*).

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 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 Central Office Services - Device Toolkit 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.

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: Test Exit! Response Stored on TSM

All of the student's responses have been saved to the Testing Site Manager (TSM). The student should return to the same testing lab to complete the test.

Please contact your local IT staff to confirm that the TSM is cleared by the end of the day. They can contact DRC Customer Support if they need additional help to resolve this matter.

Description: The student has exited the test and the test responses are stored on the TSM.

What Should I Do? Verify that all of the test responses are clear from the TSM by the end of the testing day.

Message: Test Version Error

The form the student is trying to access is not available. The form must be downloaded prior to students testing. Please contact your local IT staff to update the Testing Site Manager (TSM). If further support is required, contact DRC Customer Support.

Description: The form the testing client is trying to download from the TSM is not available.

What Should I Do? Download the form onto the TSM.

Message: Test Version Error

The test the student is trying to access is not the most up-to-date version. The latest version must be downloaded prior to students testing. Please contact your local IT staff to update the Testing Site Manager (TSM). If further support is required, contact DRC Customer Support.

Description: The form on the TSM is not up to date.

What Should I Do? Update the form on the TSM (see "Question: How do I update test forms in a TSM?" on page 17).

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: TSM Connection Error -- Could Not Register TSM

This computer cannot connect to the Testing Site Manager (TSM). The problem must be corrected before the student can continue testing. Try logging in again or restarting INSIGHT. Otherwise, contact your local IT staff to verify network and TSM connections are working. They can contact DRC Customer Support if they need additional help to resolve the matter.

Description: The connection to the TSM was lost. All responses should be stored either at DRC or on the TSM.

What Should I Do? Confirm that the testing client can reach the TSM. Also confirm that the testing client's TSM URL is correct.

Message: TSM Connection Error During Login

This computer cannot connect to the Testing Site Manager (TSM). The connection or the content must be restored before the student can continue testing. Please contact your local IT staff to verify network and TSM connections 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 TSM. This connection error occurred while trying to login.

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

Message: TSM Connection Error -- Responses May Be Stored

Please raise your hand and wait for help.

Failed to load at: variable system address

This computer can no longer connect to the Testing Site Manager (TSM). The connection must be restored before the student can continue testing. Please contact your local IT staff to verify network and TSM connections are working. They can contact DRC Customer Support if they need additional help to resolve the matter.

Description: The testing client can no longer connect to the TSM. The connection must be correct to resume testing.

What Should I Do? Contact your local IT staff and verify that you can reach the TSM. If the issue persists check your TSM computer's firewall and check your whitelisting on your firewall, content filter, proxies and other network devices.

Message: TSM Connection Error Retrieving Content

This computer cannot connect to the Testing Site Manager (TSM) 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 network and TSM connections 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 and download the test form from the TSM. 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 TSM.

Message: TSM Content Caching Configuration Error

The Testing Site Manager (TSM) is not configured to deliver testing content. Enter a different TSM for Content Caching. Please contact DRC Customer Support if you need additional help to resolve this matter.

Description: The testing client is configured to download testing content from the TSM, but the TSM is not configured to deliver content.

What Should I Do? Either the client must be set to not download content from the TSM, or the TSM must be configured to provide content. This is a configuration issue and something needs to be corrected in the setup. For example, a URL must be updated.

Message: TSM Content Caching Error

The Testing Site Manager (TSM) is not configured to deliver testing content. Testing Content will not be downloaded from the TSM. Please contact your local IT staff to update your content source configuration. They can contact DRC Customer Support if they need additional help to resolve this matter.

Description: The testing client is configured to download testing content from the TSM, but the TSM is not configured to deliver content.

What Should I Do? Either the client must be set to not download content from the TSM, or the TSM must be configured to provide content. There is an issue with content caching that cannot be updated by making a change to the configuration.

Message: TSM Version Error

The TSM is out of date. Please contact an administrator.

Description: The TSM is out of date.

What Should I Do? Update the TSM. If you did not specify automatic updates of your TSM software when you installed it, you must uninstall the current version of the TSM and reinstall the new version.

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	Erase all local user info, settings, and state after each sign-out			
	Do not erase all local user data	•			

Data Recognition Corporation (DRC) 13490 Bass Lake Road Maple Grove, MN 55311

Toll Free 1–800–451–7834 eDIRECT: https://sc.drcedirect.com Email: SCProject@datarecognitioncorp.com Revision Date: October 17, 2017