DRC INSIGHT™
ONLINE LEARNING SYSTEM

Technology User Guide
Volume I: Introduction to Online Testing

NEBRASKA

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

Nebraska Customer Service: 1-866-342-6280
Website: https://ne.drcedirect.com
Email: necustomerservice@datarecognitioncorp.com
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301 Centennial Mall South
P.O. Box 94987
Lincoln, Nebraska 68509
(402) 471-2495.

The assessment contractor is Data Recognition Corporation (DRC).
DRC can be reached by calling toll-free (866) 342-6280, by emailing necustomerservice@datarecognitioncorp.com,
or by faxing (763) 268-2540.

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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, *Volume I: Introduction to Online Testing*, introduces the components that make up DRC INSIGHT; references configuration, installation, network, and system requirement information; and provides state-specific testing information as well as a glossary of common online testing terms.

Audience and Prerequisites

All of the volumes in this guide are designed primarily for the NSCAS Alternate-Technology Assessment Coordinators (N-TACs) who are responsible for setting up and managing online testing, and ensuring their systems work effectively and securely. N-TACs should be knowledgeable about the technical details of the Windows, Mac (OS X), iOS (iPad), and Chrome (Chromebook) operating systems, and have the necessary security privileges to perform the tasks discussed in this guide.

This guide also helps Test Administrators (TAs), District Assessment Contacts (DACs), and School Test Coordinators (STCs) use DRC INSIGHT more effectively.

Important Information

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

DRC INSIGHT Online Learning System Overview

DRC INSIGHT works with various software and hardware components to provide a secure, proven online testing system that successfully delivers statewide assessments. DRC INSIGHT delivers assessments and related resources online for all content areas and grade levels by incorporating computerized testing, related resources, dynamic reporting, and a suite of tools. It works with the Central Office Services (COS) to help manage network traffic, maintain connectivity, and handle bandwidth issues.

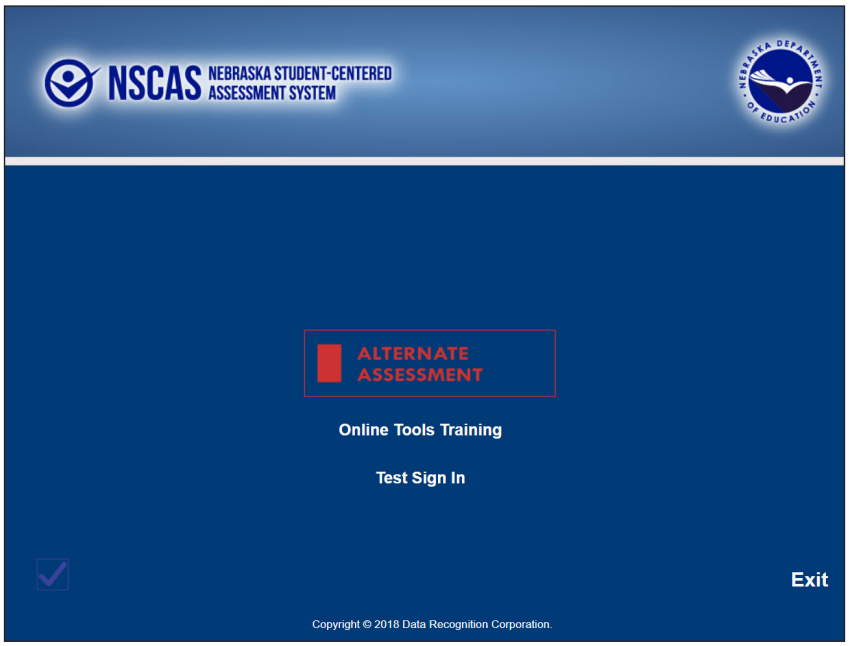
INSIGHT Web Browser and INSIGHT Server

The main component of DRC INSIGHT is the secure web-browser testing interface installed on each testing device. This software communicates with the DRC INSIGHT server to provide online tools training and test questions to the test taker and to send responses to the DRC INSIGHT server, which stores them securely. Throughout the volumes in this user guide, we refer to the secure web-browser testing interface simply as INSIGHT.

Main INSIGHT Page

When a testing device is successfully registered with INSIGHT, the main testing page appears, as shown below. The image below shows the page that appears when you start INSIGHT. This page contains links to online tests, tutorials, and Online Tools Training (OTT).

Note: In the other volumes of this user guide, a generic image is used to indicate multiple testing programs, if applicable.



Online Tools Training (OTT)

DRC INSIGHT's Online Tools Training (OTT) simulate online testing and allow students to practice using the testing interface's online tools.

- The OTT allows students to become familiar with the online test environment and the suite of online testing tools, such as the Line Guide tool and the Highlighting tool.
- The OTT contains sample test questions to help students become familiar with the tools and features available during online testing.

System Readiness Check

The System Readiness Check runs when INSIGHT is installed or starts. It helps you verify that the testing device is configured correctly and ready for testing.

Note: Install INSIGHT on the testing computers as early as possible to give students time to familiarize themselves with the INSIGHT test environment and the testing tools.

Tutorials

DRC offers online tutorials to help students become familiar with all aspects of online testing. Students can access the tutorials from the DRC INSIGHT Online Assessments Tutorials link from the main INSIGHT testing page.

The DRC INSIGHT Portal

The DRC INSIGHT portal is a secure gateway to the various testing programs and tools that you have permission to use through the eDIRECT system. The DRC INSIGHT Portal (or Portal) provides distribution and administrative functions for the DRC INSIGHT Online Learning System.

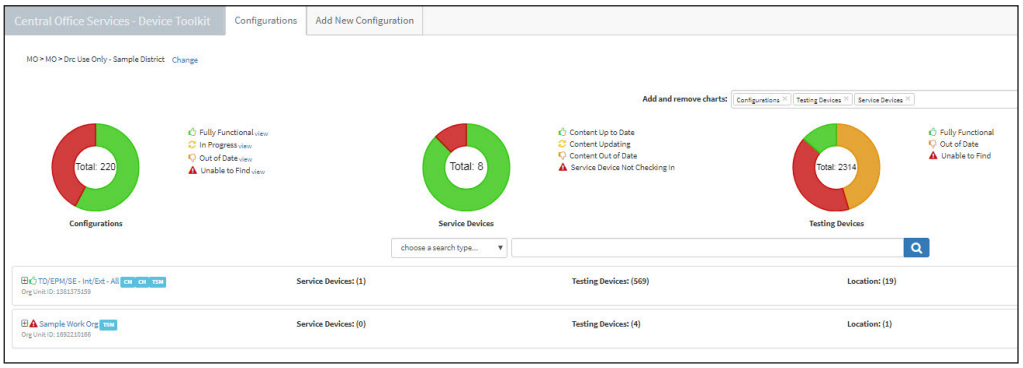
- Technical users download COS, INSIGHT, and other software and links from the Portal to set up their testing environment.
- Administrative users use the Portal to create student records, test sessions, and test groups to help manage or monitor their testing environment and report the results.

Central Office Services (COS)

Central Office Services (COS) is a software tool that allows you to install, configure, and manage your online testing environment from a central location. The complete COS software consists of a number of functional components, including the COS Service Device (SD) software which offers Content Management and Content Hosting.

The user interface to COS, the COS - Device Toolkit, allows you to seamlessly organize and configure your testing devices. The interface consists of two tabs—Configurations and Add New Configuration.

The **Configurations** tab displays a visual dashboard of the configurations that currently exist in COS. The COS dashboard displays status information about all configurations as well as links to information about specific configurations, and the testing devices and COS SDs associated with each configuration.



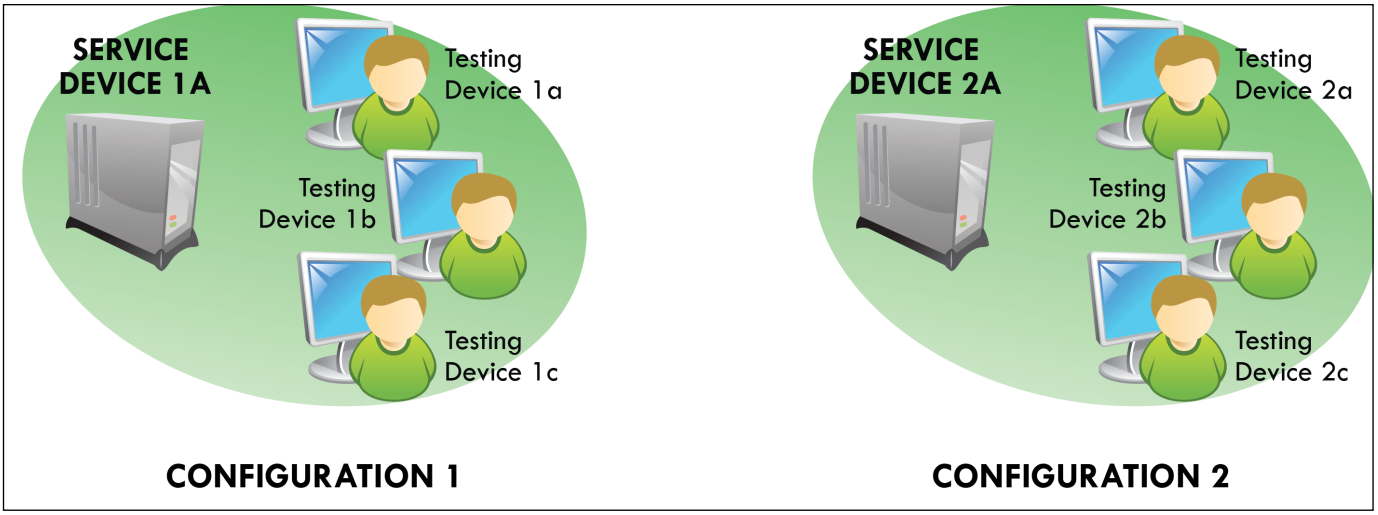
The **Add New Configuration** tab allows users to create simple COS - Device Toolkit configurations that are useful for testing students without using a COS SD.

COS Terminology

Refer to the “Glossary” on page 42 for COS terminology.

Visual Overview of COS

The COS software consists of configurations, COS SDs, testing devices, and related options. The diagram below visually overviews a sample relationship between these COS components.



Configurations
A COS configuration has two primary functions:

- It allows you to logically group testing devices and COS SDs
- It allows you to easily specify the settings for all of the devices in the configuration

In the diagram above, when a student logs into INSIGHT on any testing device in CONFIGURATION 1, their test content comes from SERVICE DEVICE 1A.

When a student logs into INSIGHT on any testing device in CONFIGURATION 2, their test content comes from SERVICE DEVICE 2A.

Service Devices
The COS SDs provide the test content and test hosting services for the configuration, if those services are enabled by the configuration.

Once an COS SD is registered with a configuration it cannot be used in another configuration without moving the device. If there are multiple COS SDs in the configuration, the device becomes part of the pool of COS SDs associated with that configuration.

Testing Devices
For a student to test using DRC INSIGHT on a testing device, the testing device must be registered to a COS configuration and cannot be used in another configuration without moving the device. After a testing device is registered with a configuration, the device becomes part of the pool of testing devices associated with that configuration. Registering a testing device to a configuration defines which COS SD will provide test content to the testing device.

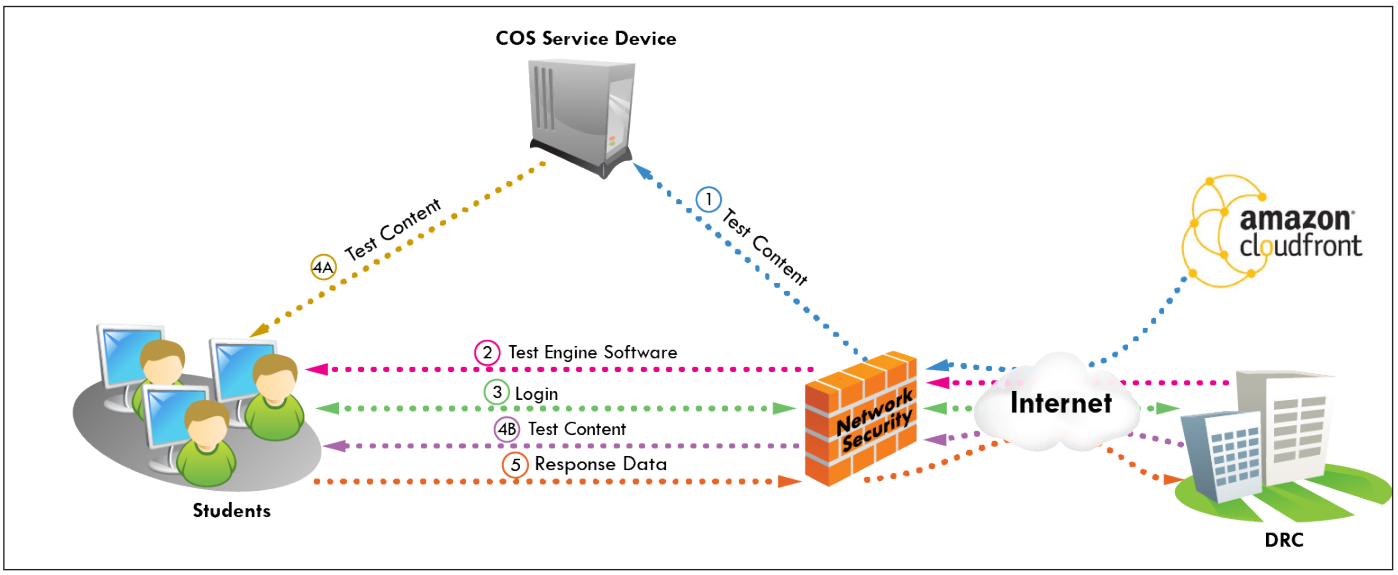
In the diagram above, moving a testing device from CONFIGURATION 1 to CONFIGURATION 2 causes the device to receive test content from SERVICE DEVICE 2A. Moving a testing device from CONFIGURATION 2 to CONFIGURATION 1 causes the device to receive test content from SERVICE DEVICE 1A.

COS Options
Within a COS - Device Toolkit configuration, indicate whether a testing device receives automatic updates of the INSIGHT software, determine which administrations will be available from the COS SD, specify a proxy host for offline testing, and other settings.

COS Testing With and Without a Service Device

The following diagram provides a visual overview of the process of testing with COS, with and without an COS SD configured for Content Management.

Diagram: COS Testing with and without a COS SD Configured



TEST CONTENT and TEST ENGINE SOFTWARE

(1) This path represents the initial path for test content with a COS SD configured to use Content Management. When the COS SD is installed, test content stored on the Amazon Web Services (AWS) Cloudfront is automatically sent to the COS SD. The Content Management service automatically checks for new content several times a day and updates the COS SD.

(2) When a student starts DRC INSIGHT (the secure browser or secure App is launched), the test engine software is automatically loaded from the DRC servers to the testing device.

(3) When a student logs in to the test, their login is verified by the DRC servers and their scheduled test sessions are sent to the testing device.

(4A) When students select a test and an COS SD is configured, the COS SD delivers the test content to their testing devices, reducing the startup time for these testers. All of the test content is encrypted for security.

(4B) When students select a test in situations when no COS SD is configured (for example, for tests with no accommodations), the test content is delivered directly from the DRC servers to the testing devices. Again, all of the test content is encrypted for security.

TEST RESPONSES

(5) This path represents the path for test response data. During testing, if the testing devices can communicate with the DRC server, the test responses (labeled Response Data in the diagram) go directly to the DRC server. If the testing devices cannot communicate with DRC, testing ends.

INSIGHT, COS SDs, Computers/ Devices, and Testing Programs

You can install a COS SD and INSIGHT on a computer, and configure INSIGHT to support one or more testing programs (for example, and your state-specific testing program).

- You can install a COS SD on a Windows, Mac, computer, but you can only install one COS SD per computer.

  You can use the same COS SD for multiple testing programs. You specify the COS SD to different locations within the COS - Device Toolkit configuration.

- You can install INSIGHT on a Windows, Mac, computer, or on a Chromebook or iPad device.

  From that single computer or device, you can use INSIGHT to access multiple testing programs. When you start INSIGHT, a page lists the different testing programs from which you can select.

- You can install a COS SD and INSIGHT on the same Windows or Mac computer.
- You can install INSIGHT on a Windows, Mac, computer and configure it to work with a COS SD that is installed on a different Windows, Mac, computer.
- You can install INSIGHT on a Chromebook or iPad device and configure it to work with a COS SD that is installed on a Windows, Mac, computer.

Software Installation and Update Rights for INSIGHT and COS

Certain software rights are required to install and/or automatically update INSIGHT and the COS SD software.

- INSIGHT requires Administrator rights to install it and Write access to perform the software Auto Update function.
- The COS SD software requires Administrator rights to install it.

  COS SDs are automatically updated with new software releases without manual intervention, assuming that the computer is turned on and has Internet access.

Online Testing Setup Options

You can create a variety of online testing setups using COS and INSIGHT. The documentation to install, configure, manage, and troubleshoot the COS and INSIGHT for these various setup options is available in the following volumes:

Volume I: Introduction to Online Testing

This volume introduces the components that make up DRC INSIGHT; references configuration, installation, network, and system requirement information; and provides state-specific testing information, as well as a glossary of common online testing terms.

Volume II: Central Office Services (COS)

This volume describes how to install, set up, and use COS for Content Management and Content Hosting, as well as how to use the COS - Device Toolkit interface to work with COS SDs, and testing devices. You use this volume to understand how to use the COS - Device Toolkit interface with COS configurations.

Note: Any site that plans to use proxy hosts during testing (computers that act as an intermediary between either a COS SD and the Internet to prevent direct Internet access) should reference *Volume II: Central Office Services (COS)*.

Volume III: DRC INSIGHT

This volume describes how to install DRC INSIGHT on testing devices, register the devices, and use the System Readiness Check to verify that the devices are ready for online testing.

Volume IV: Troubleshooting

This volume describes how to use various testing resources and tools, contains frequently asked online testing Q &As, and provides a list of common error messages plus corrective action.

Online Testing Setup Options (cont.)

The particular information you need to know varies based on how you plan to perform online testing. The *COS Online Testing Setup Options and Tasks* table lists the online testing setup options (A & B) that are available, indicates which volumes to reference, and highlights the tasks required for each option.

COS Online Testing Setup Options and Tasks

Online Testing Setup A	Reference	Tasks
Install COS and use the COS Device - Toolkit interface to manage COS SDs and testing devices. One or more COS SD are configured for Content Management and Content Hosting.	*Volume I: Introduction to Online Testing*	Review whitelisting information and other network considerations.
	Volume II: Central Office Services (COS)	Install COS SD and use the COS - Device Toolkit interface to create, configure, monitor, and manage configurations/ locations containing COS SDs and testing devices.
	Volume III: DRC INSIGHT	Install, configure, and manage INSIGHT, including registering testing devices with COS configurations.
	Volume IV: Troubleshooting	Use testing tools and troubleshoot issues.
Online Testing Setup B	**Reference**	**Tasks**
Use the COS Device - Toolkit interface to manage one or more COS configurations containing testing devices only. Test content is received directly from DRC without caching of any type. • You do not need to install COS SD software. • No COS SDs are configured for Content Management or Content Hosting.	*Volume I: Introduction to Online Testing*	Review whitelisting information and other network considerations.
	Volume II: Central Office Services (COS)	Use the COS - Device Toolkit interface to create, monitor, and manage configurations/ locations containing testing devices only—no caching is performed.
	Volume III: DRC INSIGHT	Install, configure, and manage DRC INSIGHT, including registering testing devices with COS configurations.
	Volume IV: Troubleshooting	Use testing tools and troubleshoot issues.

■ Online Testing Setup Options (cont.)

The *Setup Options for a COS configuration* table provides an overview of COS configuration online testing setup options for online testing setups A & B. These testing setups include the following variables:

- COS SDs, with or without Content Management (CM)/Content Hosting (CH) turned on
- Locations within the COS configuration

Setup Options for a COS configuration

Setup	COS Installed①	CM/CH②	Setup Description/Notes
A	Yes	Yes or No	The COS – Device Toolkit interface with one or more COS SDs, CM/CH on or off.
B	No	NA	The COS – Device Toolkit interface only—no COS SDs.

Table Notes

① COS Installed indicates a combination of the COS – Device Toolkit interface and one or more COS SDs. The COS – Device Toolkit interface monitors and manages COS SDs, and testing devices, and is required for online testing.

② After the COS software is installed, CM/CH can be turned on for an COS SD.

System Requirements and Testing Information

What's Covered in This Section

This section points to the document describing the specific hardware, software, network, and desktop requirements to configure Central Office Services (COS), INSIGHT, and automatic software updates. This section also discusses the tasks necessary to configure the INSIGHT software environment, including the tasks to configure INSIGHT to connect directly to DRC servers and databases through the Internet.

Nebraska Configuration Information

This guide includes information about the operating systems, software, devices, and accommodations that work with INSIGHT and COS. The specific technical information covered in this user guide (and related Technical Bulletins) that pertains to Nebraska is shown below. Use this information as reference throughout the volumes in this user guide.

Operating Systems

Windows
Mac (OS X and macOS)
Apple iOS and iPadOS
Chrome OS

Central Office Services (COS) Caching and Other Options

Content Management
Content Hosting
Proxy Host and Restricted Proxy Host*

*A COS Service Device (SD) is required.

Accommodation(s)

NA

Testing and Capacity Tools

Testing Site Capacity Estimator
Load Balancing

System Requirements Information

The DRC system requirements information describes the specific hardware, software, network, and desktop requirements to configure INSIGHT and COS to work with various testing devices in different testing scenarios. This information is updated regularly based on various factors, including changes in vendor support of various operating systems and hardware devices.

To review the current information, refer to the *DRC INSIGHT Online System Supported System Requirements,* available at your state's Portal site, by navigating to **All Applications–General Information–Downloads** and clicking **View System Requirements** at the bottom of the Test Setup General Information page.

Automatic Software Updates

For online testing, the COS and INSIGHT software must be up to date. You can use the System Readiness Check to confirm that you have the latest version of the COS and INSIGHT software (see *Using the System Readiness Check* in *Volume III: DRC INSIGHT*).

Operating System Updates

COS and INSIGHT software updates are different than operating system updates. On testing days, testing devices should not be set to automatically update the operating system.

Operating system vendors such as Google, Microsoft, and Apple are moving to a model where operating system updates occur automatically in the background. Update processes running in the background on testing devices consume CPU and memory, and can affect the testing experience.

To avoid this situation, verify that no background processes are running on testing devices during testing. Also, if a testing device is set to accept operating system updates automatically, verify that it has the most current version of the operating system before the test session starts.

COS Software Updates

COS software is designed to automatically receive updates. After you install the software, COS will automatically retrieve and install updates as they become available.

INSIGHT Software Updates

To specify that the INSIGHT software automatically updates the testing devices, use the Central Office Services - Device Toolkit to select **Enable Auto Update** during the configuration process (see *Volume II: Central Office Services [COS]*).

- If the Auto Updates feature is enabled, the software checks the version each time INSIGHT is launched and provides the option to install any software updates.
- If the Auto Updates feature is not enabled, the software also checks the version when INSIGHT starts.
  - When a student attempts to log in to a test, the student is notified that they do not have the latest version of the software and cannot continue.
  - You must update the software manually by downloading the latest version from the Portal and reinstalling.

Update your software *before* testing begins to avoid delays.

Important: INSIGHT requires Administrator rights to install and Write access to the installation folder to perform the Auto Update function.

Network Requirements for Testing Computers

This section describes various network considerations for online testing.

Network Connectivity

To ensure proper network connectivity for testing, keep the following information in mind.

- All testing computers should have access to the Internet and be able to access the DRC servers using HTTP/HTTPS protocols on ports 55222, 55223, 55224, and 55225.
- All firewalls at the testing computer and network level should allow connectivity on ports 55222, 55223, 55224, and 55225.
- Whitelist the following file types, both internally and externally:

  - enc

  - **exe** (for updates)

  - **msi** (for updates)

  - gif

  - **html**

  - **jar**

  - **jpeg**

  - json

  - xml
- Prioritize and whitelist INSIGHT traffic on firewalls, Internet packet shapers, routers, switches, proxies, and other network devices that you use.

Network Connectivity (cont.)

Each testing program uses its own URLs to communicate from the INSIGHT software to the DRC servers. Whitelist the URLs shown in the table below on the content filtering systems or other proxy/firewall software that you use locally.

Program	URLs	Ports
Nebraska	https://drc-centraloffice.com https://ne-insight-client.drcedirect.com https://ne-insight.drcedirect.com https://ne.drcedirect.com https://www.drcedirect.com https://wbte.drcedirect.com https://dtk.drcedirect.com https://api-gateway-cloud.drcedirect.com https://api-gateway.drcedirect.com https://cdn-content-prod.drcedirect.com https://cdn-download-prod.drcedirect.com	80/http 443/https (applies to all of the URLs)

Notes:

- When whitelisting, you can whitelist *.drcedirect.com if your filter allows wildcard addresses. DRC recommends that you whitelist *.drcedirect.com if possible. Some locations may have to whitelist both the individual address and the wildcard address.
- If your location uses an Internet connection idle timeout, verify that the timeout limit is sufficient to allow students to complete testing.
- If your location uses screensavers, verify that the timeout limit is sufficient to allow students to complete testing.
- DRC recommends allowing INSIGHT traffic to bypass your firewalls and proxies if possible.
- Besides whitelisting these sites, you may need to allow sites to pass through the proxy server without requiring authentication credentials to be passed by INSIGHT.

Wireless Networking

INSIGHT supports wireless networks. However, sites may experience issues on less reliable wireless networks or if too many students attempt to connect to a single access point. When you test load capacity in a wireless network, verify that your access points and network can handle the number of simultaneous users that will be testing.

Important: Some access points interpret COS-to-INSIGHT communication as peer-to-peer networking. If you have Layer 7 or peer-to-peer web filtering rules in your filters and access points, DRC recommends that you disable them.

Desktop Monitoring

If your testing location uses remote desktop monitoring software to monitor the computers that will be used for testing, that software may interfere with the testing software.

Important: If possible, disable the monitoring software on testing computers during test times to guarantee adequate security. The particular steps you need to take vary, depending on the monitoring software you are using and the operating system of the testing computer. If it is not feasible to disable your monitoring software, ensure that any staff members who can use the monitoring software refrain from using it during testing periods.

INSIGHT Bandwidth and Connectivity Requirements

To start a test, INSIGHT contacts DRC to log in. After a successful login, INSIGHT downloads the test from the DRC server (or a COS SD if available). INSIGHT sends answers to the DRC server every time the page is changed. If a testing computer cannot communicate with DRC, the student cannot log on to start a test.

- INSIGHT must maintain connectivity to a source of test content—a COS SD, or DRC via the Internet—throughout the test.
- INSIGHT supports wireless networks. If you test using wireless networks, be careful not to overload the network access points.
- DRC recommends Ethernet networks where available for online testing.

Bandwidth Calculation Guidelines

Bandwidth requirements and recommendations are based on the *actual amount of bandwidth available*. Even with a high-speed communication line, only part of the connection may be available for online testing due to Internet traffic. The greatest amount of bandwidth is required when students download tests.

Calculating Bandwidths

You can estimate bandwidth requirements by dividing the size of the test by your target wait time (the amount of time it should take the test to load).

Bandwidth Required with a Content Hosting COS SD

With a content hosting device, more students can load the test at a time. Using a content hosting decreases your Internet bandwidth requirements because you can load the test from the COS SD rather than from the DRC server, which greatly increases your capacity.

Important: Bandwidth calculations are estimates. There are many variables, including network traffic, that can impact actual network performance.

Background Applications and Online Testing

You should turn off all background applications such as email, streaming, and so forth on your testing devices before online testing begins to ensure that email notifications and other processes do not interrupt online testing.

INSIGHT and Virtual or Remote Desktops

INSIGHT is a desktop-installed application that runs natively* on specific operating systems. To successfully launch and run INSIGHT, you must meet system requirements, such as operating system level, processor, disk space, memory, Internet connectivity, and screen resolution.

**Running natively refers to running without external support, as opposed to running in an emulation.*

As long as your virtual/remote machines meet these requirements, you can run INSIGHT in a virtual or remote desktop environment. However, if your site uses virtual computing technology and runs INSIGHT on virtual/remote operating systems and/or devices, you must implement appropriate security measures to ensure that these virtual/remote desktops cannot access other applications during the administration of an online assessment.

Virtual Desktop Operating Systems

Besides the physical devices that host operating systems directly, virtual desktops can indirectly host some supported operating systems for INSIGHT. Typically, users access these virtual desktops from another operating system, on another device, across a network boundary. The following table lists the supported and unsupported operating systems for virtual or remote desktop sessions.

Supported Operating Systems	Unsupported Operating Systems
• Microsoft Windows • Mac (OS X and macOS) • Linux • nComputing vSpace	• Google Chrome OS • Apple iOS • Google Android

Virtual Desktop Devices

The device a student interacts with is actually a gateway to the virtual or remote desktop. However, the device may or may not be capable of supporting INSIGHT natively or be able to run an operating system that INSIGHT supports. The following table lists the types of devices that can run the various operating systems that INSIGHT supports.

Supported Devices	Unsupported Devices*
• Desktop computers • Laptops • Netbooks/tablets • Servers • Wyse Thin Clients and Wyse Zero Clients • nComputing devices	• Chromebooks • tablets • Convertible devices and hybrid devices • Phones • iPods • Other UNIX devices

Important: *Virtual and remote desktop software can access supported operating systems. If you test using unsupported devices, ensure that students cannot access the Internet and other resources.

Windows 7 Desktop Font Size Requirements

The testing computers' font size settings must match the test settings to guarantee that line breaks and other items display correctly during testing. The following table shows the correct font size setting for testing and how to specify it for the Windows 7 operating system.

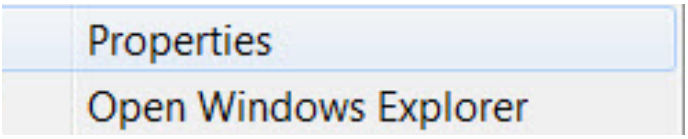
Operating System	Font Size Setting	How to Check or Change
Windows 7	100% (Custom DPI)	Select **Control Panel–Appearance and Personalization–Display–Set custom text size (DPI)**. When you click **Apply**, your new font size setting will be used in your Windows programs.

Windows 7 Taskbar Security Requirement

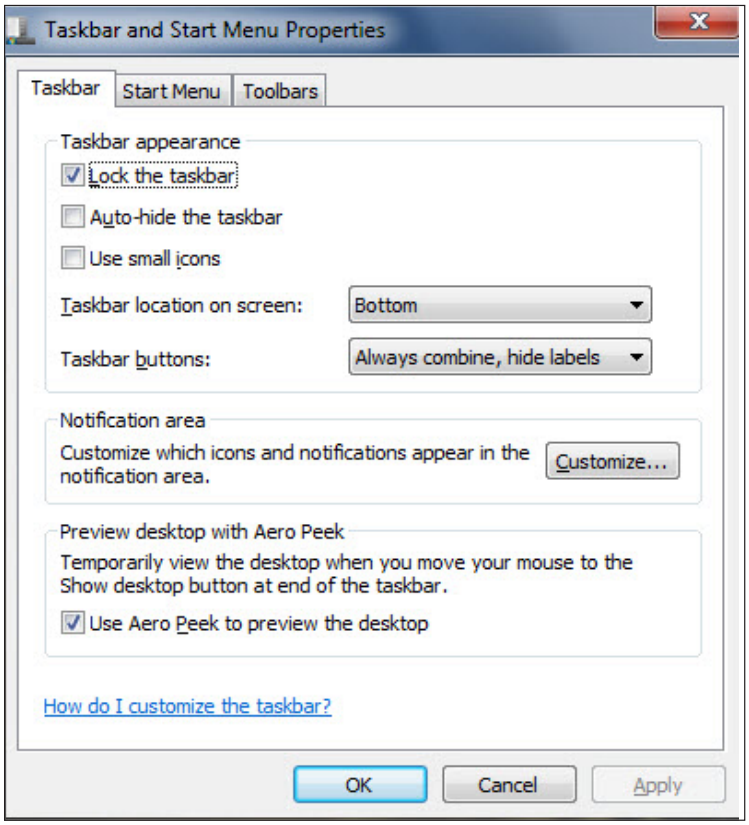
During testing, each testing computer is locked down while INSIGHT is active to prevent the student from having access to outside information. For Windows computers, you must be sure the **Auto-hide the taskbar** setting is turned off to secure the testing computer.

To turn off the **Auto-hide the taskbar** setting on a Windows 7 computer, perform the following steps:

1. Right-click on the Windows logo on the taskbar and select **Properties**.



2. From the Taskbar tab on the Taskbar and Start Menu Properties dialog box, uncheck the **Auto-hide the taskbar** checkbox (if it is checked).



3. Click **Apply** to verify your change and **OK** to save it.

Online Testing, Testing Devices, Peripheral Devices, and Software Features

This topic discusses various configuration details related to testing devices, peripheral devices, and software features for online testing.

Peripheral/Feature	Device	Description	Reference
Game Bar	Windows 10	Sites must disable the Game Bar feature on Windows 10 devices before testing, either manually or by using group policy. DRC has confirmed that testers testing on Windows 10 computers can capture screen shots of test questions within INSIGHT if the Game Bar feature is active.	See "Testing and the Windows 10 Game Bar" on page 29
Cortana	Windows 10	For Windows 10 devices, Cortana must be disabled for testing, either manually or by using group policy.	See "Disabling Cortana in Windows 10 Devices" on page 32
Microphone	iPad	The first time sites launch INSIGHT on an iPad, they must enable the microphone even if they are not taking a speaking test.	See "Enabling the Microphone on an iPad" on page 33
Keyboard	Chrome (plus a note about iPads)	Before students start taking a writing test using a Chrome device, the testing site must verify that the device's keyboard configurations are correct for online testing. Specifically, sites must verify the keyboard configurations if students might use quotation marks (" ") and/or apostrophes (') in test responses. Because some users may be prohibited from using these characters, DRC recommends configuring your device to use the US keyboard.	See "Keyboard Settings for Chrome Devices" on page 35 (for iPads, see the "Keyboard Note Regarding iPad Devices" that follows)
Trackpad/mousepad	MacBook	Before testing, sites must manually disable both Look up and Three finger drag/Gestures functionality. Look up allows users to tap a word with three fingers to display a definition of the word. Three finger drag/Gestures allows users to access multiple applications by swiping between two full-screen apps. This functionality is activated via the device's trackpad/mousepad. If it is enabled, students have the potential to access unauthorized information and/or applications during the online assessment.	See "MacBook Trackpad/ Mousepad Settings" on page 37
Timeout Settings	Mac (OS X and macOS)	For Mac (OS X and macOS) computers, it is important that various timeout settings are set to work with the INSIGHT timeout value to avoid timing out during testing.	See "Manually Adjusting the Timeout Settings on a Mac Computer" on page 38

Testing and the Windows 10 Game Bar

When INSIGHT is started on a Windows 10 machine, the software verifies whether the Game Bar feature is active. If the Game Bar is active, INSIGHT displays the message shown below.

To continue, the user must click OK, which closes the message and shuts down INSIGHT. To successfully launch INSIGHT and use it for testing, the Game Bar feature must be disabled (see "Turning Off the Game Bar Feature in Windows 10" on page 31). After the game bar feature is disabled, the user can launch INSIGHT and log in to it without the message displaying.

Background

DRC has confirmed that testers testing on Windows 10 computers can capture screen shots of test questions within INSIGHT if the Game Bar feature is active. If the Windows 10 Game Bar feature is active, testers can use it to specify that DRC INSIGHT is a game and to capture screen images of test questions within the INSIGHT test engine by performing the following steps:

1. Launch INSIGHT.
2. Press **Windows–Alt–PrtScn**. A text box appears allowing the user to mark DRC INSIGHT as a game.
3. Select **Yes, this is a game**.
4. Continue the test and use the **Windows–Alt–PrtScn** key combination to take screen shots. The screen shots are saved to the Videos\Captures folder.

Disabling the Windows 10 Game Bar

Testing site personnel must disable the Game Bar feature on Windows 10 computers, prior to testing. There are multiple methods available to accomplish this task.

Method 1: Turn Off the Feature on Each Computer

The first method is to turn off the Windows 10 Game Bar on each computer on which it is active. There are two ways to accomplish this:

- Testing personnel can turn the feature off manually for all users of the computer (see "Turning Off the Game Bar Feature in Windows 10" on page 31).
- Administrators can use the Windows Local Group Policy Editor to edit the local policy for the computer and turn the feature off, either for all users, or for a group of users of the computer.

- The Local Group Policy Editor is only available in the Windows 10 Pro, Enterprise, and Education editions.
  - A user must be signed in as an administrator to use the Local Group Policy Editor.
  - By default, policies set in the Local Group Policy Editor are applied to all users unless the administrator applies user policy settings for *administrators*, *specific users*, or *all users except administrators*.

  For more information, refer to https://www.tenforums.com/tutorials/51180-enable-disable-game-dvr-game-bar-windows-10-a.html.

Method 2: Turn Off the Feature for a Group of Computers

The second method is for site administrators to turn off the feature for a group of computers within a network domain by editing the Domain Group Policy which affects all of the computers in the domain. For more information about this method, refer to your Windows network policy documentation.

Turning Off the Game Bar Feature in Windows 10

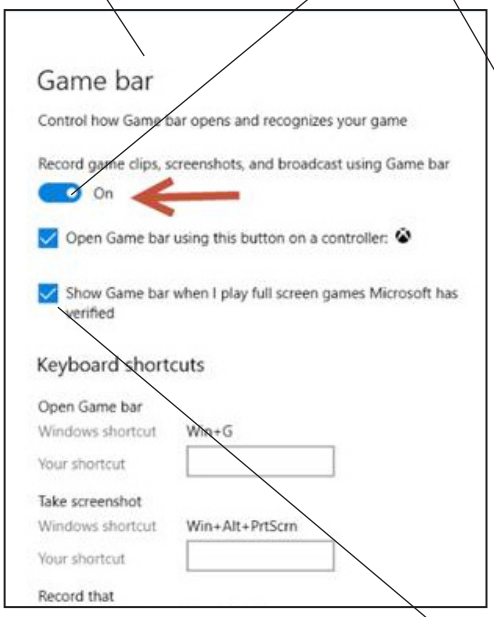
Perform the following steps to turn off the Windows 10 Game Bar feature if this feature has not already been disabled. You can reverse these steps after testing is complete to turn the Game Bar feature on again.

Process

1. Exit INSIGHT, open the **Settings** menu, and navigate to **Gaming**.

2. Select **Game bar** from the left menu.

3. Toggle the **Record game clips, screenshots and broadcasting using Game bar** toggle from **On** to **Off**.



4. If checked, uncheck the **Open the Game bar using this button on a controller** checkbox and the **Show Game bar when I play full-screen games Microsoft has verified** checkbox.

5. Close the **Settings** menu. To verify your results, restart INSIGHT and press the **Windows–Alt–PrtScn** key combination. If the Game Bar feature is disabled, nothing should happen. Check the **Videos\Captures** folder to verify that no new screenshots exist.

Disabling Cortana in Windows 10 Devices

For Windows 10 devices, Cortana must be disabled for testing, either manually or by using group policy.

Disabling Cortana Manually

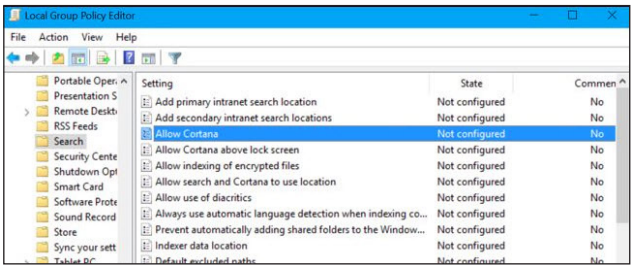
To disable Cortana manually on a Windows 10 device, do the following:

1. Launch **Cortana** from the Search bar on the Task bar.
2. From the left pane click **Settings**.
3. Under Cortana, toggle the switch to **Off**.

Disabling Cortana by Using Group Policy

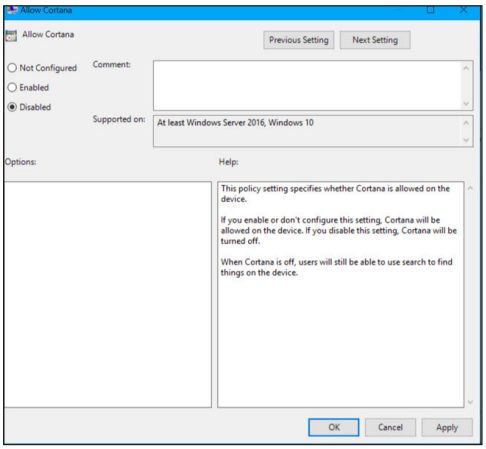
To disable Cortana using Group Policy on Windows 10 devices, do the following:

1. Type **gpedit.msc** in the Task bar search bar and press **Enter** to open the Local Group Policy Editor.
2. Navigate to **Computer Configuration–Administrative Templates–Windows Components–Search**.
3. Double-click on **Allow Cortana** to open the Settings box.



The Allow Cortana group policy setting specifies whether Cortana is allowed on the device. If you enable or don't configure this setting, Cortana is allowed on the device. If you disable this setting, Cortana is turned off on the device.

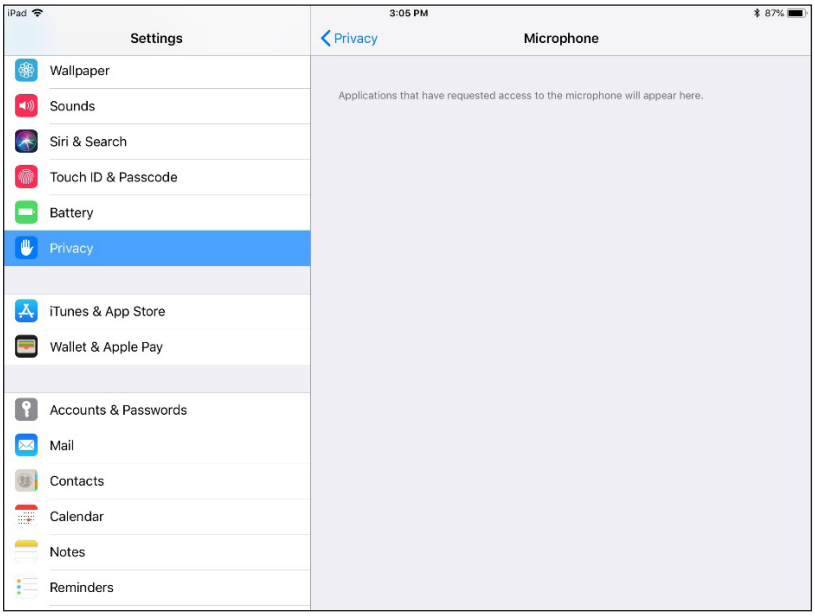
4. Set **Allow Cortana** to **Disabled**, click **OK**, and close the group policy editor.



5. Sign out and sign back in–or restart your PC–to make the change take effect.

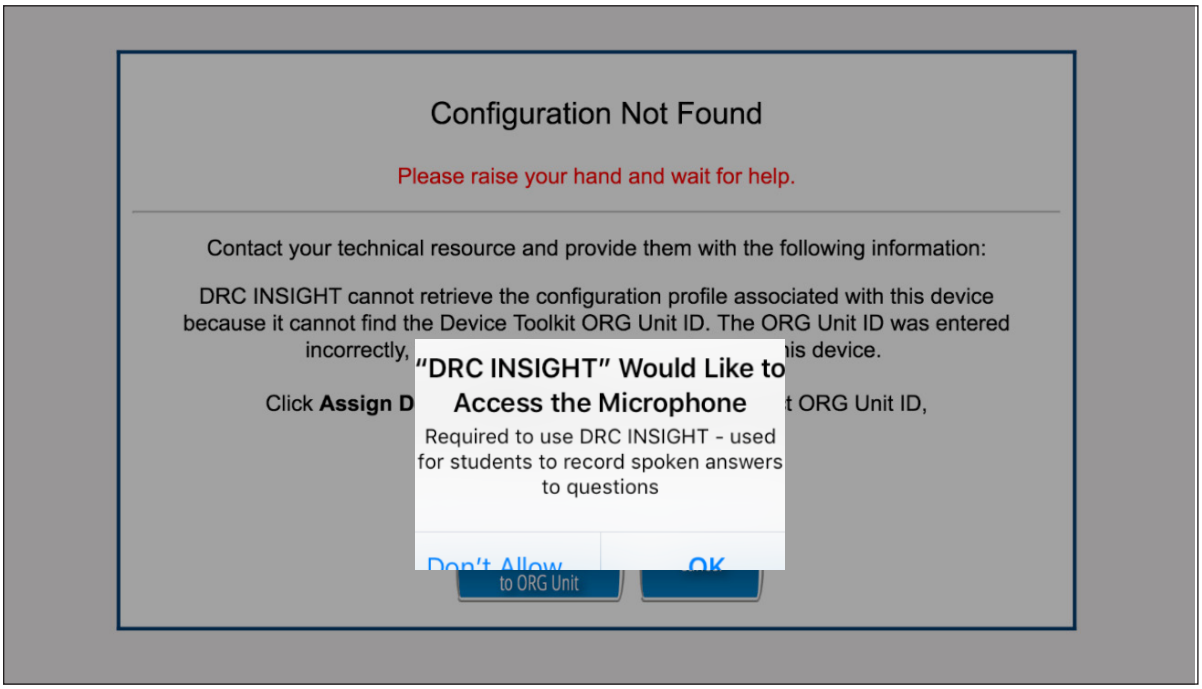
Enabling the Microphone on an iPad

Before INSIGHT is installed on an iPad, there is no microphone access setting under **Settings-Privacy-Microphone** (see below).



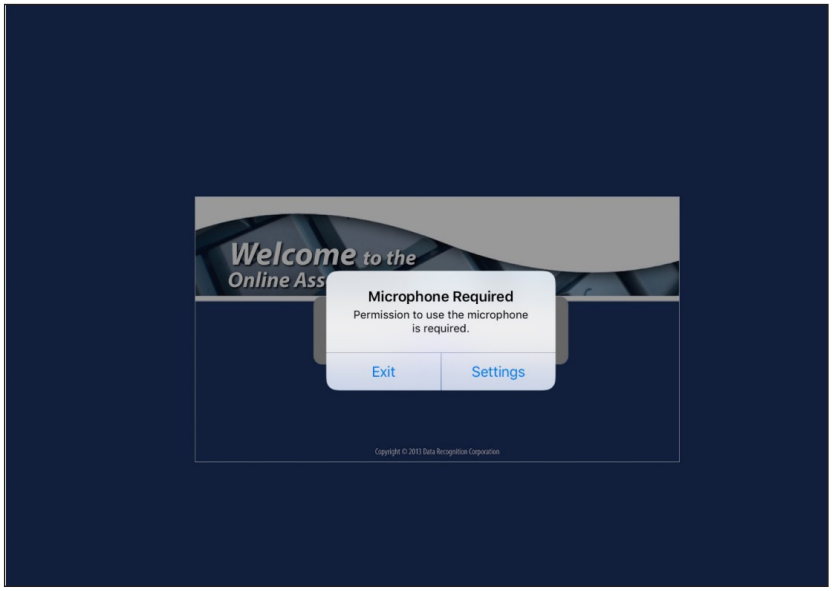
1. After INSIGHT is installed, the first time it is launched a prompt displays to disallow/allow microphone access. Tap **OK**.

Important: Even if the testing administration does not use a microphone or any speaking-response tests, the test administrator MUST tap **OK** to allow microphone access.

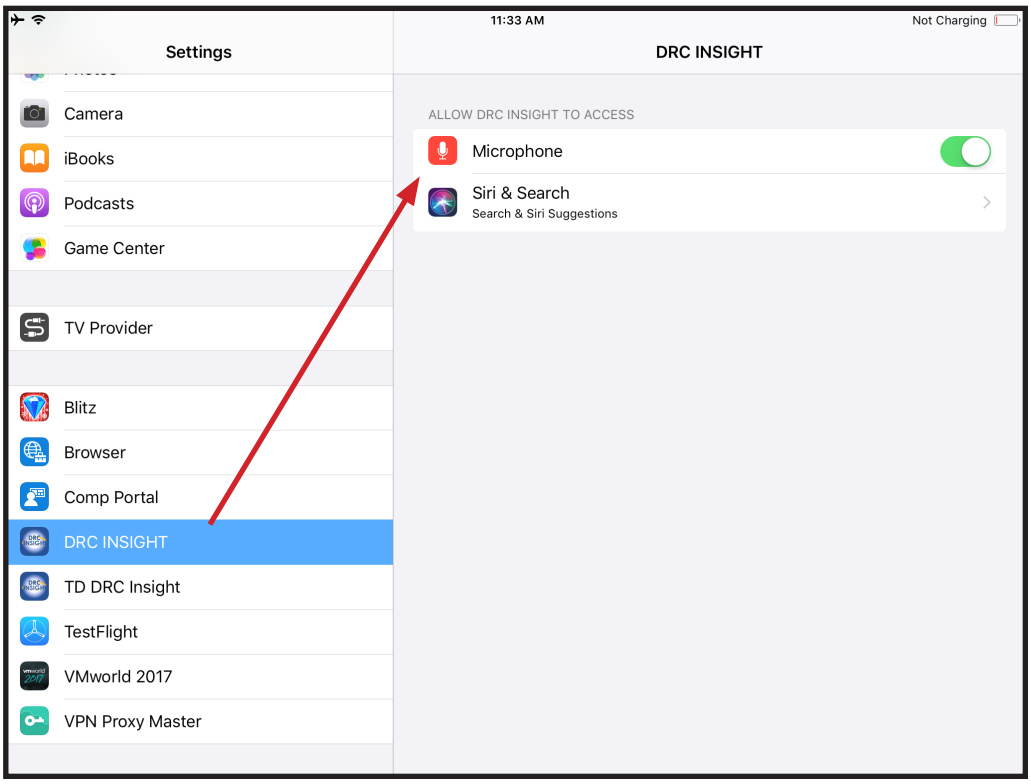


Enabling the Microphone on an iPad (cont.)

2. If the test administrator selects **Don't Allow** instead of **OK**, INSIGHT displays the following message and testing cannot continue.



3. If this happens, the test administrator must click **Settings**, manually enable the microphone for INSIGHT using the **DRC INSIGHT** slider (see below), and restart INSIGHT.



Keyboard Settings for Chrome Devices

Before students start taking a writing test using a Chrome device, the testing site should verify that the device's keyboard configurations are correct for online testing. Specifically, if students might use quotation marks (“ ”) and/or apostrophes (‘) in test responses, sites must verify that the testing device is configured correctly.

As background, both quotation marks and apostrophes are commonly used in Text-Dependent Analysis (TDA) responses where a student's response is based on a passage presented to the student and the student must provide evidence from the passage to support claims, opinions, and ideas. Some Chrome OS configurations may cause these characters to not display properly, or cause an error message to display.

Important: INSIGHT does not adjust operating system settings, so these keyboard settings should be reviewed before testing begins.

Keyboard Note Regarding iPad Devices

For the INSIGHT iPad App, version 8.0 and higher, INSIGHT is automatically placed in Guided Access Mode regardless of whether Mobile Device Management (MDM) software is used to deploy the App.

When INSIGHT launches, the software prompts you to lock INSIGHT in Single App Mode and you should select Yes. When the iPad is locked in Single App Mode, the Smart Punctuation feature is turned off. Turning this feature off removes the issues discussed above concerning quotation marks (“ ”) and/or apostrophes (‘). For more details, refer to *Preparing the iPad for Testing* in *Volume III: DRC INSIGHT*.

Chrome Keyboard Settings

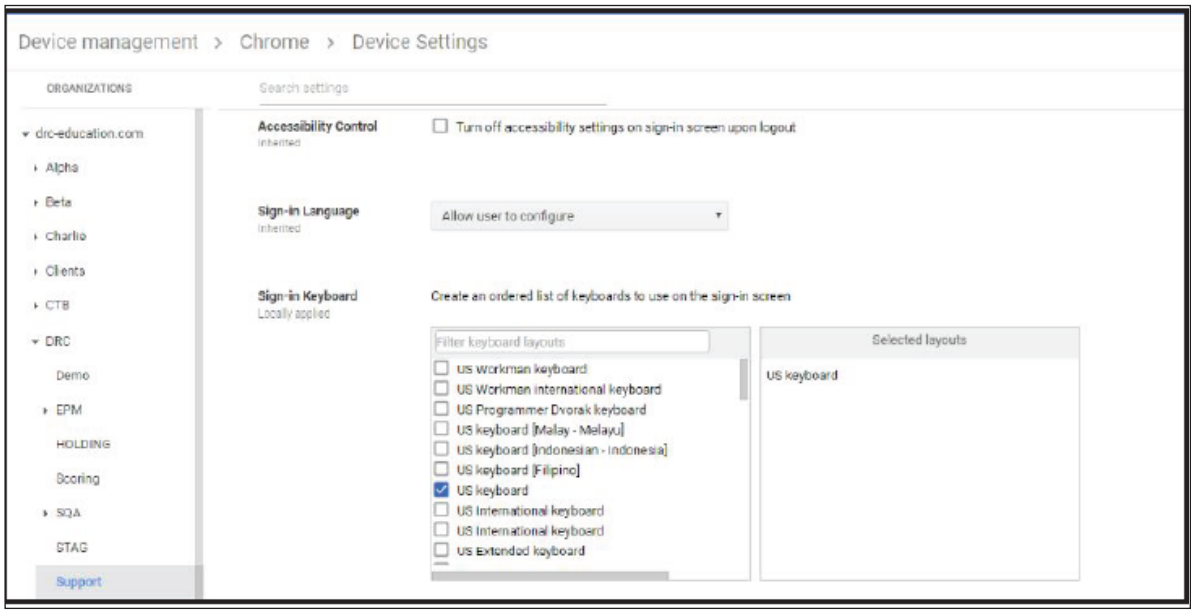
For Chrome OS devices, to ensure that quotation marks and apostrophes display properly in INSIGHT, the keyboard should be set to **US Keyboard**, the language should be set to **English (United States)**.

Changing Chrome Keyboard Setting by Using Shortcuts

On the Chrome device, press **Ctrl–Shift–Spacebar** to toggle through the keyboard types configured on the device until **US** is displayed in the status area in the bottom-right of the desktop.

Changing Chrome Keyboard Setting by Using the Google Admin Console

Within the Google Admin Console, navigate to **Device management–Chrome–Device Settings** and select **US Keyboard** (see the image below).



Changing the Chrome Keyboard Language Setting

If the language setting on a Chromebook keyboard is set to International English (vs. US English), it can cause the quotation marks button to become unavailable. Remove International English and add US English to the available languages.

1. Sign on to the Chromebook and click the Status area.
2. Click **Settings–Show advanced settings**.
3. In the Languages section, click **Language and input settings**.
4. Select **English (United States)**. If it is not available, click **Add**, select **English (United States)**, and click **OK**.
5. In the right column, click the **English (United States)** box.
6. Click **Done**

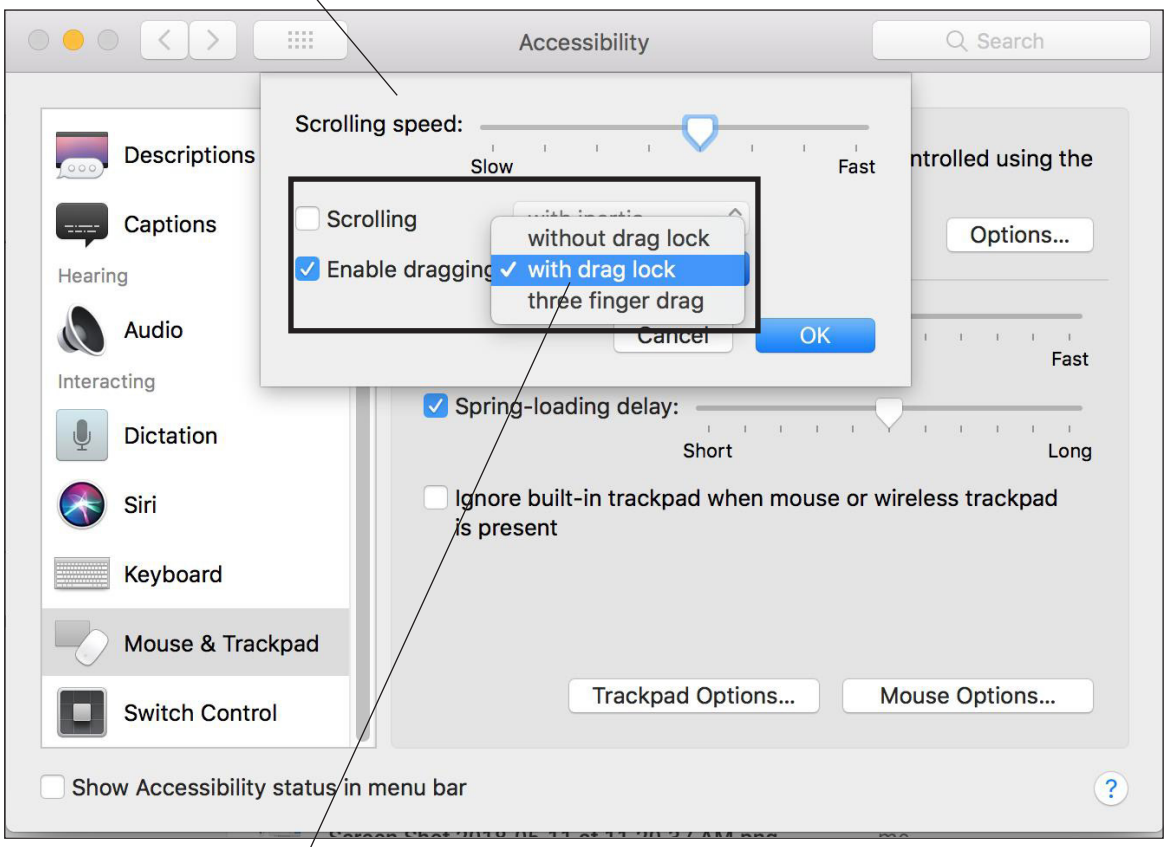
Ensure that the Chromebook keyboard is set to US keyboard and not US international keyboard.

MacBook Trackpad/Mousepad Settings

On MacBook devices, OS X level 10.11 and later, sites must manually disable the **Scrolling** and **Enable dragging with drag lock** functionality. Scrolling allows users to tap a word with three fingers to display a definition of the word. Enabling dragging with drag lock prevents users from accessing multiple applications by swiping between two full-screen apps.

Important: DRC strongly recommends that sites disable this functionality *before* online testing. If school technology personnel cannot disable the functionality without disrupting testing, sites must closely monitor sessions using MacBooks to watch for any use of this functionality.

1. To disable the Scrolling feature and enable the Dragging feature manually, use the Finder (or click on the Apple icon in the upper left-hand corner of the screen) and select **System Preferences...** to display the System Preferences page.
2. Select **Accessibility–Mouse and Trackpad–Trackpad Options**.



3. Uncheck **Scrolling** and check **Enable dragging**. From the drop-down menu that displays, select **with drag lock**.

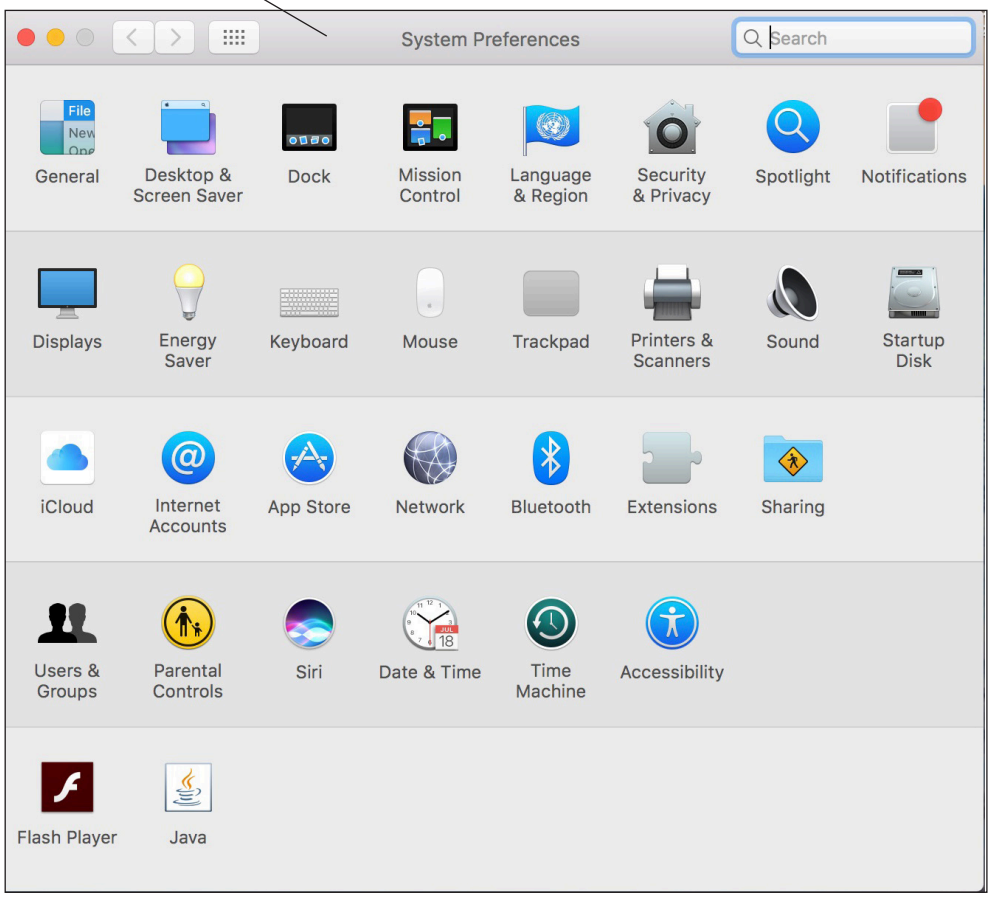
Manually Adjusting the Timeout Settings on a Mac Computer

Online testers that are using Mac (OS X and macOS) devices for testing must verify that the various computer timeout settings are set in combination to a value that works with the INSIGHT timeout value. DRC recommends that the combination of screen saver and energy-saving timeout settings on Mac testing devices should be greater than the INSIGHT timeout value.

Important: For most DRC clients, INSIGHT is set to time out after twenty minutes of inactivity during a test session (a sixty-second countdown/warning displays before the timeout begins). Some clients have requested different timeout values for INSIGHT. Please verify with your site administrator if you are unsure which timeout value you are testing with. These instructions assume the standard value of twenty minutes.

On a Mac computer, the Mac administrator must verify that the three timeout settings for Security Privacy, Energy Saver, and Desktop & Screen Saver are set correctly. These timeout settings are adjusted from the System Preferences page.

To display the System Preferences page, use the Finder (or click on the Apple icon in the upper left-hand corner of the screen) and select **System Preferences....**

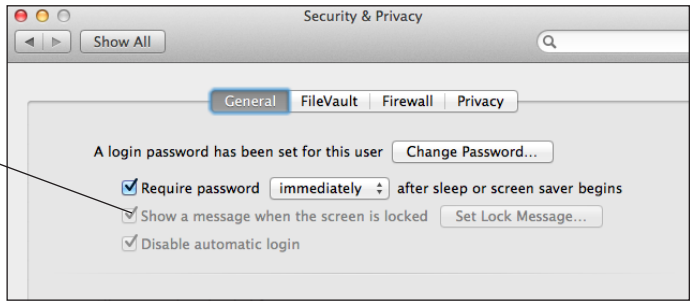


Manually Adjusting the Timeout Settings on a Mac Computer (cont.)

On a Mac computer, the best way to prevent screen display timeout issues is to disable the Security Privacy setting **Require Password after sleep or screen saver begins during testing**. If this setting is disabled, the computer will not require a screen password during testing.

1. To disable the setting, select **Security & Privacy** from the System Preferences page.

2. Uncheck **Require Password after sleep or screen saver begins**.



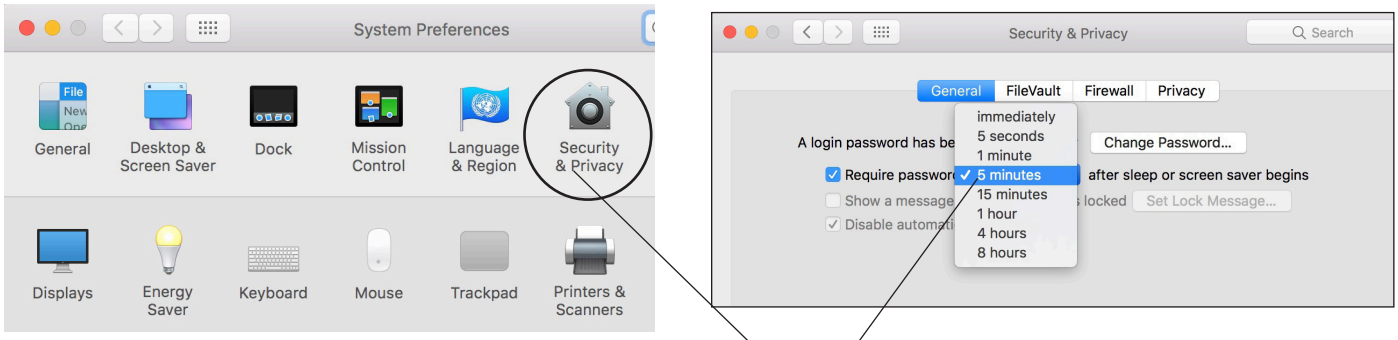
3. Click **Turn Off Screen Lock**.

Manually Adjusting the Timeout Settings on a Mac Computer (cont.)

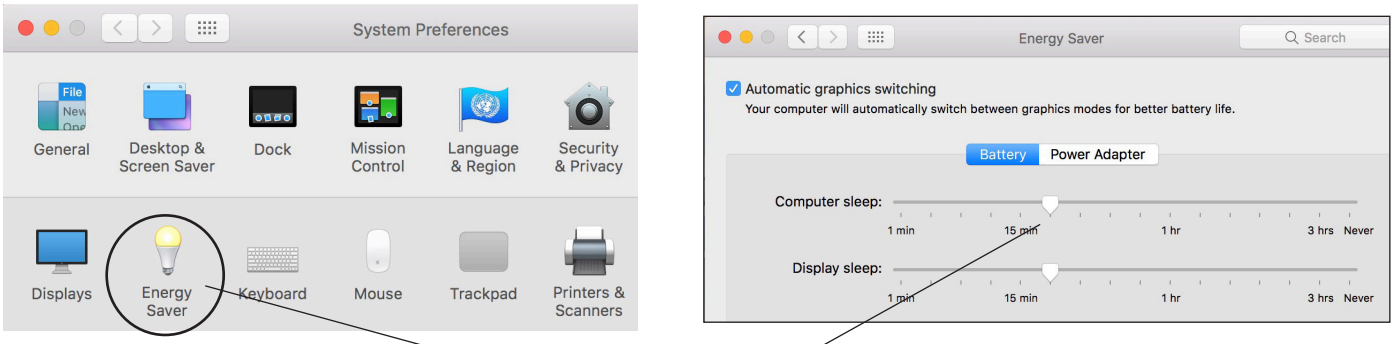
If the **Require Password after sleep or screen saver begins** setting is not disabled during testing, the combined time for various timeout settings on the System Preferences page—Require Password X Minutes after sleep or screen saver begins, the Energy Saver settings for Computer sleep and Display sleep, and the Screen Saver start time—must total twenty minutes or more (based on the INSIGHT timeout setting).

Example of Combining Timeout Settings

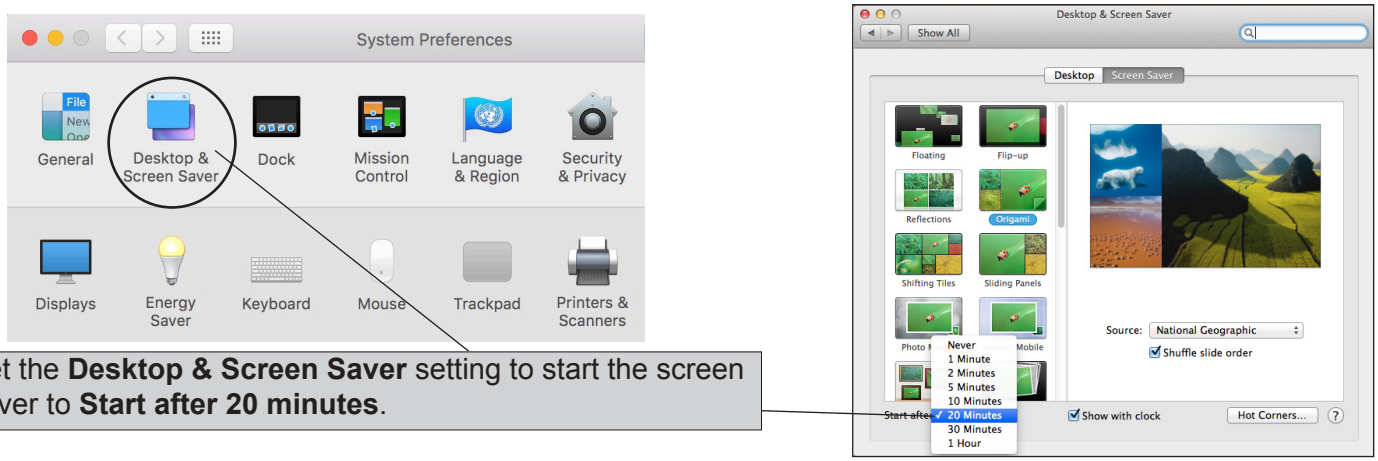
The example below shows how to combine timeout settings for testing with INSIGHT. With these settings, the testing computer will wait more than twenty minutes before requiring a password, fifteen minutes before sleeping, twenty minutes before starting the screen saver, and five minutes after going to sleep or starting the screen saver. Note that this is one example—other combinations of timeout settings also work well.



1. Set the Security & Privacy password to **Require Password 5 minutes after sleep or screen saver begins**.



2. Set the **Energy Saver** screen slider settings for **Computer sleep** and **Display sleep** to a value of 15 minutes or greater.



3. Set the **Desktop & Screen Saver** setting to start the screen saver to **Start after 20 minutes**.

Glossary

Central Office Services (COS)

Central Office Services (COS) is a software tool that allows you to install, configure, and manage your online testing environment from a central location. COS consists of two major software components, the COS - Device Toolkit interface and the COS Service Device (COS SD). In addition, the COS software also offers a number of functional software components, including Content Management and Content Hosting.

Central Office Services - Device Toolkit

DRC provides software called the Central Office Services - Device Toolkit that you use to configure the testing devices in your environment. You use the Central Office Services - Device Toolkit to organize, configure, and manage your devices for testing.

Configuration

A COS configuration is a logical grouping of devices, usually consisting of one or more COS SDs and testing devices. A COS configuration has two primary functions: It allows you to logically group testing devices and COS SDs and it allows you to easily specify the settings for all of the devices in the configuration.

Note: For simple testing scenarios, COS provides options to create configurations containing testing devices only.

Content Hosting

The COS service used to provide content to student testing devices. This service authenticates content requests, decrypts content, and aggregates items into forms.

Content Hosting Server Domain Name

A unique, identifying URL generated on the COS SD. The COS Server Domain address points to DRC to retrieve the local IP address for the COS SD. The actual local IP address that is used is determined by the priority set on the COS SD's Network Interface Card (NIC).

Content Management

The COS service used to manage the delivery of test content to each site that needs Content Hosting. Sites can download only the test content they need to reduce download times. For example, a site could download test content for only one administration.

COS users can set up Content Management to download content to a network shared location that multiple Content Hosting services can use.

DRC INSIGHT Online Learning System

DRC's system to deliver assessments and related resources online for all content areas and grade levels by incorporating computerized testing, related resources, dynamic reporting, and a suite of educator tools. The DRC INSIGHT Online Learning System consists of a secure web browser testing interface and the Central Office Services (COS) to help manage network traffic, maintain connectivity, and handle bandwidth issues.

- **DRC INSIGHT**

The main component of the DRC INSIGHT Online Learning System, DRC INSIGHT is a secure web-browser testing interface that is installed on each testing device. This software communicates with the DRC INSIGHT server to provide and test questions to the test taker and to send responses to the DRC INSIGHT server, which stores them securely.

- **Dynamic IP Address**

An IP address that can change when the computer or device is restarted or rebooted based on the pool of IP addresses that are available at the time.

- **Kiosk Mode**

When DRC INSIGHT runs on a supported device and operating system, it uses Kiosk Mode to “lock down” student access and prevent students from performing inappropriate testing activities, such as accessing the Internet.

Note: On an iPad device, Kiosk Mode is referred to as Single App Mode.

- **Latency**

The rate of data transfer across a network is referred to as latency. Knowing the latency of a network is useful for helping to determine peak network traffic times and for analyzing the best times for testing.

- **Location**

For COS - Device Toolkit, the term location is defined as a site within a client testing program. For example, a specific school within a state testing program. A COS configuration can have multiple locations and testing programs, such as the state testing program and . A single COS SD can be used in multiple locations within a COS configuration.

- **Native Device**

A device that can run INSIGHT-supported operating systems natively if it meets the minimum system requirements. Running natively means running without external support, as opposed to running in an emulation.

- **Online Tools Training (OTT)**

An optional, customized feature of DRC INSIGHT that allows students and administrators to become familiar with the online test environment and their suite of online testing tools.

- **Service Device (SD)**

A device that has the COS SD software installed on it and has been configured to provide one or more testing services, such as Content Management and Content Hosting.

- **Static IP Address**

An IP address that is permanently assigned to a computer or device and does not change when the computer or device is restarted or rebooted.

System Readiness Check (SRC)

A software program that helps you troubleshoot issues that may occur when DRC INSIGHT is installed or running. The SRC is installed automatically when you install DRC INSIGHT, runs anytime DRC INSIGHT is launched, and performs a series of tests that you can use to diagnose, prevent, or correct most errors easily. It verifies that a testing device meets the necessary hardware and software requirements for testing, indicates any checks the testing device failed, and provides suggestions for success.

Test Engine

Software that is automatically downloaded at the start of a test to help manage the delivery of the test.

Testing Device

A device that has the DRC INSIGHT software installed on it and has been configured to work with one or more COS SD.

Testing Site Capacity Estimator

An Excel spreadsheet file you can download and use to estimate the following testing times:

- The time it will take to initially download the test engine software based on the number of students who test at the same time.
- The times a student will wait for a test to load.
- The time required for a student to receive the next test question when the student is finished with a question (the time required for the testing computer to save the test response and retrieve the next question).

Thin Client

A computer that relies on servers for information processing and other tasks.

Virtual Desktop

Desktops that can indirectly host some supported operating systems for DRC INSIGHT (other physical devices host operating systems directly). Typically, users access virtual desktops from another operating system, on another device, across a network boundary.

Virtual Desktop Device

A device a student interacts with, which is actually a gateway to the virtual or remote desktop. The device may or may not be capable of supporting DRC INSIGHT natively or be able to run an operating system that DRC INSIGHT supports.

Notes

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

Nebraska Customer Service: 1-866-342-6280
Website: https://ne.drcedirect.com
Email: necustomerservice@datarecognitioncorp.com
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