



TECHNOLOGY USER GUIDE

NEBRASKA

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Notes:

Section One: Introduction



■ DRC INSIGHT Online Learning System

The *DRC INSIGHT Technology User Guide* describes the components, both required and optional, that make up the DRC INSIGHT Online Learning System—a web-based, online interface used with a combination of software and hardware to provide a secure, online testing environment.

The DRC INSIGHT Online Learning System, or DRC INSIGHT, is a proven online testing system that successfully delivers secure statewide assessments.

DRC INSIGHT delivers assessments and related resources online for all content areas and grade levels, as it incorporates computerized testing, related resources, dynamic reporting, and a suite of educator tools. It consists of a software interface that is available from a secure web browser and the Testing Site Manager, or TSM, to help manage network traffic, maintain connectivity, and handle bandwidth issues.

■ About This Guide

This User Guide is designed primarily for NeSA-Technology Assessment Coordinators (N-TACs) who are responsible for setting up, managing online testing, and ensuring their systems work effectively and securely. We assume that all N-TACs are knowledgeable about the technical details of the Windows, Mac (OS X), and Linux operating systems, and have the necessary security privileges to perform the tasks discussed in this guide.

This guide is also designed to help Test Administrators (TAs), District Assessment Contacts (DACs), and School Test Coordinators (STCs) use DRC's INSIGHT Online Learning System more effectively. It provides help with configuration and installation. It also helps answer some common questions and provides troubleshooting tips.

This User Guide is an introduction and reference for DRC INSIGHT. It describes its features and user interface, as well as how to configure, install, manage, and troubleshoot DRC INSIGHT. It contains configuration and installation information for various operating system environments, describes how to use DRC INSIGHT and its components, and provides tips and techniques for troubleshooting issues, as well as frequently asked questions (FAQs).

Throughout this User Guide, the Information icon  indicates important information or critical tips.

■ INSIGHT Web Browser and INSIGHT Server

■ Testing Site Manager (TSM)

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 this User Guide, we refer to the secure web browser interface as simply INSIGHT.

INSIGHT also provides the Testing Site Manager (TSM), a powerful, web-based application that provides caching and a software toolbox to help you plan, configure, and manage your online testing environment.

Usually, you install the TSM caching software on one or more strategic computers with sufficient bandwidth to help manage and streamline communication between the test computers and the DRC INSIGHT server. DRC strongly recommends the TSM caching software for maximum performance.

The TSM offers two types of caching—content caching for test content and response caching for student test responses. At test time, the TSM content caching software sends its cached test items to the testing computers. This content must be up to date in order for students to test.

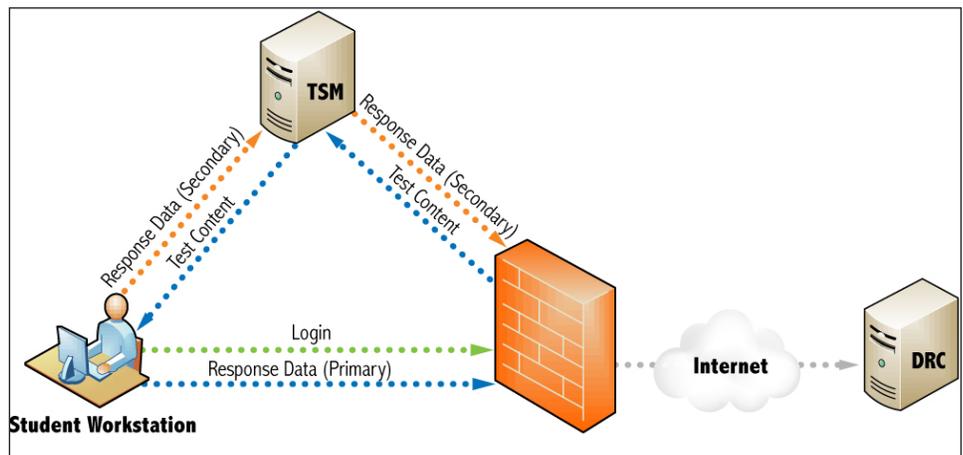


Figure 1-1: TSM Content and Response Caching

During testing, if the test computers cannot communicate with the DRC INSIGHT server, the response caching software buffers and stores their test responses. When the response caching software is communicating with DRC, it sends test responses to the DRC INSIGHT server every fifteen minutes. Even if DRC is not currently communicating with the testing computers, the test responses are still being stored on the TSM for transmission to DRC, so no responses are lost.

Note: TSM response caching is used *during* a test session—students cannot start a test session if there is no communication between the INSIGHT server and the testing device.

■ Local Caching Service (LCS)

In earlier releases of INSIGHT, the TSM caching software was referred to as the Local Caching Service (LCS). The TSM offers all of the caching functionality of the LCS plus a suite of powerful software tools, including Load Simulation Tests and Ping Trend Graphs, to help sites prepare and manage their test environment.

Note: The suite of tools is configurable.

■ Online Tools Training (OTT)

DRC INSIGHT's optional Online Tools Training (OTT) is customized for each state and allows students and administrators 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.

Note: It is important to 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 optional, online tutorials, to help testers become familiar with all aspects of online testing.

■ Text-To-Speech (TTS)

INSIGHT offers a special testing accommodation called Text-To-Speech (TTS). TTS allows a student to hear the test recorded by a computer-simulated voice.

Note: There is no separate installation for TTS and a TSM is required.

Section Two: Configuration



■ What's Covered in This Section

■ Nebraska Configuration Information

■ iPad and Chromebook Configuration Information

The Configuration section describes the specific hardware, software, network, and desktop requirements to configure INSIGHT, the Testing Site Manager (TSM), and automatic software updates.

This section discusses tasks NeSA-Technology Assessment Coordinators (N-TACs) perform to configure the INSIGHT software environment. N-TACs can configure INSIGHT to use with TSM systems and to connect directly to the DRC servers and databases through the Internet.

This User Guide includes information about the operating systems, software, devices, and accommodations, that work with INSIGHT and the TSM. A testing location may use a subset of this offering depending on the location and type of assessment.

The specific technical information covered in this User Guide that applies to assessments in Nebraska is shown below. Use this information as reference throughout the User Guide.

Operating Systems

- Windows
- Mac (OS X)
- Linux

TSM and Other Options

- Response Caching
- Content Caching
- Capacity Estimator
- Load Simulation Testing
- Ping Trends

Accommodation

- Text-To-Speech (TTS)

ⓘ Important: The configuration and installation information for iPad devices and Chromebooks will be supplied initially as a separate Appendix to this User Guide and will be available September 22, 2014. This information will include updated lists of supported operating systems and devices.

■ Testing Checklist

The following is a checklist of the tasks N-TACs must successfully complete before and during testing to use INSIGHT and the TSM.

Before Testing

- ✓ Review the *DRC INSIGHT Online Learning System Technology User Guide*.
- ✓ Uninstall the old TSM and INSIGHT software and install the new TSM and INSIGHT software (see the Installation sections). Verify that you have the latest versions
- ✓ Start the TSM and ‘name’ it using following naming convention: *district+school+location in the building* (see “Using the TSM” on page 67).
- ✓ Complete a System Readiness Check on each testing computer (see “Using the System Readiness Check” on page 100).
- ✓ Run at least one Online Tools Training (OTT) test (“Online Tools Training (OTT)” on page 63).
- ✓ If you have TTS, review “Text-To-Speech (TTS) Configuration” on page 24.

During Testing

- ✓ On the first day of testing, verify that all content displays a status of **Up to Date** in the TSM (see “Using the TSM” on page 67).
- ✓ During testing, monitor student responses on the TSM (see “Viewing Unsent Student Test Responses” on page 72 to ensure that the value for Unsent Tests is 0 [zero]).

At the End of the Test Administration

- ✓ Verify that all tests are completed.
 - ⓘ **Important:** At the end of the testing cycle, all of the test responses that have been submitted to DRC are scored. At that time, DRC automatically changes all tests with a status of In Progress to Complete, which submits the test results. This process, called “forced submit”, helps DRC verify that all test results are accounted for (responses left on the TSM that DRC has not received are not scored).
- ✓ Verify that the value for Unsent Tests on each TSM is 0 (zero)—see “Viewing Unsent Student Test Responses” on page 72.

■ Installation Files

Different INSIGHT and TSM installations are available for each operating system. The following table lists the file(s) or URL for each type of installation and operating system.

Note: There is no separate installation for Text-To-Speech (TTS), and no accommodation is supported in a Linux environment.

Installation	Operating System	File(s)/URL
INSIGHT	Windows	DRC_INSIGHT_Setup.msi
	Mac (OS X)	DRC_INSIGHT_Setup.pkg
	Linux	DRC_INSIGHT_Setup_amd64.deb (64-bit) DRC_INSIGHT_Setup_i386.deb (32-bit)
TSM	Windows	TESTING_SITE_MANAGER_Setup.exe
	Mac (OS X)	TESTING_SITE_MANAGER_Setup.dmg
	Linux	TESTING_SITE_MANAGER_Setup.sh

INSIGHT System Requirements

This topic covers the minimum and recommended requirements for INSIGHT on testing computers, including desktops, laptops, netbooks, and other devices, using the supported operating system platforms. These requirements vary based on the accommodations offered.

INSIGHT Requirements for Desktops, Laptops, and Other Non-Tablet Devices

The following table describes the minimum and recommended system requirements for desktop, laptop, and netbook computers.

⚠ Important: The minimum level is a low compliance threshold—at this level, the software and/or hardware may not deliver an optimal student testing experience. Devices may struggle with memory and processing power, which can reduce responsiveness and increase response times during testing. DRC advises using the recommended level.

Desktop, Laptop, and Netbook Computers		
Operating Systems	Minimum	Recommended
Windows <ul style="list-style-type: none"> Windows XP with Service Pack 3 Windows Vista* Windows 7 Windows 8 (including 8.1) non-touch-screen versions <p>TTS is not supported for Windows Vista.</p>	<p>Windows XP with Service Pack 3</p> <p>Microsoft discontinued support for Windows XP April 8, 2014, which presents security and support risks for schools that continue to use it (see “Support for Windows XP and Mac 10.6.8 (OS X)” on page 27).</p>	Windows 7 or newer
Mac OS <ul style="list-style-type: none"> OS X 10.6.8 OS X 10.7 OS X 10.8 OS X 10.9 	<p>Mac OS 10.6.8</p> <p>Apple discontinued support for Mac 10.6.8 in 2013, which presents security and support risks for schools that continue to use it (see “Support for Windows XP and Mac 10.6.8 (OS X)” on page 27).</p>	Mac OS 10.7 or newer
Linux* Ubuntu 12.04.1 *No accommodation is supported in a Linux environment.	Ubuntu 12.04.1, 32-bit and 64-bit with Gnome 3.4, Unity shell, and kernels 3.0.1–3.3	Same or newer
Memory	512 MB RAM	1 GB RAM or greater
Processor	500 MHz	1 GHz or faster

INSIGHT Requirements for Desktops, Laptops, and Other Non-Tablet Devices (cont.)

Desktop, Laptop, and Netbook Computers		
	Minimum	Recommended
Disk Space	100 MB available	Same or more available
Screen Size	9.5 inches or larger	13 inches or larger
Screen Resolution	800 x 600	1024 x 768 or higher
Internet Connectivity	Computers must be able to connect to the Internet via wired or wireless networks.	
Input Device Requirements	Keyboard – wired or wireless, Bluetooth, mouse, or touchpad	
	To meet secure testing requirements, each Bluetooth or wireless keyboard must be configured to pair with only a single computer during testing.	
	The input device must allow students to: <ul style="list-style-type: none"> • Select/deselect • Drag • Highlight text, objects, and areas. • Enter letters, numbers, and symbols • Shift, tab, return, delete, and backspace 	
Other Devices	Standard interface devices such as mice, keyboards, touchpads, headphones, microphones, earphones, and ear buds are supported.	

Table 2-1: System Requirements for Desktop, Laptop and Netbook Computers

Notes:

- For Windows users, DRC recommends Windows 7.
- For Windows 8 and other operating systems with touch-screen versions, only non-touch-screen versions are supported.
- Smart Board interfaces, which function as a touch-screen device, are not supported. If you are using a Smart Board, you may need to disable or uninstall it.
- For Mac installations, Mac Server software is not supported.
- For Linux installations, Ubuntu Server software is not supported.

Web Browser Requirements

DRC INSIGHT runs on a custom Chrome web browser to ensure a fully secure testing environment. In addition, the eDIRECT system you use to download INSIGHT and the TSM supports the web browsers detailed in the following tables.

Operating System	Web Browser(s)
Microsoft Windows	Mozilla Firefox, Google Chrome, Microsoft Internet Explorer
Apple Mac OS X	Mozilla Firefox, Apple Safari, Google Chrome
Linux	Mozilla Firefox, Google Chrome

Table 2-2: Supported Web Browsers by Operating System

Web Browser	Minimum	Recommended
Google Chrome	27.x	31.x or newer
Mozilla Firefox	21.x	26.x or newer
Apple Safari	5.x	7.x or newer
Microsoft Internet Explorer	8.x	10.x or newer

Table 2-3: Minimum and Recommended Web Browser Levels by Browser Type

! **Important:** The minimum level is a low compliance threshold—at this level, the software and/or hardware may not deliver an optimal student testing experience. DRC advises using the recommended level.

INSIGHT Software Updates

You can specify that INSIGHT perform automatic software updates to the testing computers. To do this, check the Enable Automatic Update checkbox on the INSIGHT Automatic Update dialog box during the INSIGHT installation process (see the Installation sections). You can modify this setting by using the System Readiness Check software application (see “Setting DRC INSIGHT Properties” on page 110).

- If the Auto Updates feature is enabled, the software checks the version each time INSIGHT is launched, and provides you 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 students attempt to log in to a test, they are notified 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 eDIRECT and reinstalling.
 - You can run a System Readiness Check at any time to confirm that you have the latest version of INSIGHT software (see “Using the System Readiness Check” on page 100).
 - Update your software *before* testing begins to avoid delays.
- ⚠ **Important:** Updates do not require administrative rights, but you must have Write privileges to the installation folder.

TSM Software Updates

You can specify whether to have updates to the TSM software be performed automatically, or to be notified when updates to the TSM software are available and install them manually. When you install a TSM, on the Automatic Update window you specify whether to enable notification of TSM software updates.

- If you select **Enable Automatic Update** (the default value), DRC updates the TSM software automatically.
 - If you select **Disable Automatic Update**, DRC notifies you whenever an update to the TSM software is available and you must update the software manually.
- ⚠ **Important:** On the day of testing, confirm that the TSM software is up to date to ensure that students can test. For example, if the machine where the TSM is installed was turned off recently, it is possible that the TSM software is out of date.

Network Requirements for Testing Computers

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 80 and 443.
- All firewalls at the testing computer and the network level should allow connectivity on ports 80 and 443.
- Make sure that you whitelist the URLs below on the content filtering systems or other proxy/firewall software that you use locally:
 - http://ne-insight-client.drccdirect.com
 - https://ne-insight.drccdirect.com
 - https://wbte.drccdirect.com
- If your location uses an Internet connection idle timeout, please verify that the timeout limit is sufficient to allow students to complete testing.
- If your location uses screensavers, please 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.

For more information, see “Question 1: I Don’t Know What to Whitelist, Allow, or Unblock?” on page 134 in Appendix B.

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.

! **Important:** 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. DRC recommends performing load testing in a wireless network.

Desktop Monitoring

! **Important:** If your testing location uses remote desktop monitoring software to monitor the computers that will be used for testing, you should **disable the monitoring software on these 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.

Note: If it is not feasible to disable your monitoring software, you must 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 the TSM if available). INSIGHT sends answers to DRC every time the page is changed (or to the TSM if communication with DRC is lost*).

- INSIGHT must maintain connectivity to the Internet or a TSM throughout the test.
- INSIGHT supports wireless networks.

*If a testing computer cannot communicate with DRC, the student cannot log on to start a test.

Bandwidth Calculation Guidelines

Remember, 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).

The bandwidth calculations are based on the following assumptions:

- A T1 line transfers data at 1.5444 Mbps.
- The average test size is 1 MB (8 Mb).
- Your target wait time to load a test (1 MB) is 10 seconds.
- All of your students load the test at the same time, instead of staggering log in attempts.

Note: You can increase your capacity by increasing the wait time and staggering your log in attempts.

Bandwidth Required with no TSM

Each student requires 8 Mb/10 seconds, or .8 Mbps, so 1-2 students at a time can load the test in 10 seconds (2 x .8 is 1.6, slightly more than 1.5444). To have 12 students load their tests simultaneously, you would need a total bandwidth of 12 x .8 Mbps, or 9.6 Mbps.

Bandwidth Required with a TSM

With a TSM, twice as many students at a time can load the test. A TSM decreases your Internet bandwidth requirements by approximately 50% because you can load the test from the TSM rather than from the DRC server. In essence, this doubles your capacity.

■ The TSM

The TSM offers two types of caching: Content Caching to cache tests and test items, and Response Caching to cache student responses. With Response Caching, if the Internet connection to DRC fails, students can continue testing. When the TSM is communicating with DRC, it transmits its cached response information every fifteen minutes.

DRC recommends using a TSM. It is required for TTS.

■ Benefits and Features

A TSM offers many benefits and features:

- You can install the TSM using an easy-to-use installation wizard (requires administrative rights).
- You can populate the TSM with test content using its Content Caching option. After the content is installed, updates to test content are automatically downloaded.
- A TSM typically reduces bandwidth traffic for schools by about 50% when downloading test content.

■ Connection Information

A TSM can help students during exams:

- With no TSM, the testing computers submit answers directly to the DRC servers through the Internet. If that communication stalls because the Internet connection is congested, messages between the testing computers and DRC are delayed. If the delay is too long, the software stops testing and the student loses the connection.
- With a TSM, if the communication stalls because the Internet connection is congested, the testing computer sends its answers to the TSM response cache. Every fifteen minutes, the TSM attempts to automatically submit its collected test responses to DRC, which helps manage message traffic. You also can submit test responses manually.

TSM Requirements

This topic covers the minimum and recommended requirements for the TSM using the supported operating system platforms. The following table describes these requirements.

Notes:

- A TSM is required for TTS.
- There is no separate installation for any accommodation.

⚠ Important: The minimum level is a low compliance threshold—at this level, the software and/or hardware may not deliver an optimal student testing experience. Devices may struggle with memory and processing power, which can reduce responsiveness and increase response times during testing. DRC advises using the recommended level.

TSM		
Operating Systems	Minimum	Recommended
Windows <ul style="list-style-type: none"> • Windows XP with Service Pack 3 • Windows Vista • Windows 7 • Windows 8 (including 8.1), non-touch-screen versions. 	Windows XP with Service Pack 3 Microsoft discontinued support for Windows XP April 8, 2014, which presents security and support risks for schools that continue to use it (see Support for Windows XP and Mac 10.6.8 (OS X)” on page 27).	Windows 7 or newer
Windows Server <ul style="list-style-type: none"> • Windows Server 2003 • Windows Server 2008 • Windows Server 2012 	Windows Server 2003	Windows Server 2008 or newer
Mac OS <ul style="list-style-type: none"> • OS X 10.6.8 • OS X 10.7 • OS X 10.8 • OS X 10.9 	Mac OS 10.6.8 Apple discontinued support for Mac 10.6.8 in 2013, which presents security and support risks for schools that continue to use it (see “Support for Windows XP and Mac 10.6.8 (OS X)” on page 27).	Mac OS 10.7 or newer
Linux* Ubuntu 12.04.1 *No accommodation is supported in a Linux environment.	Ubuntu 12.04.1, 32-bit and 64-bit with Gnome 3.4, Unity shell, and kernels 3.0.1–3.3	Same or newer
Screen Size	9.5 inches or larger	13 inches or larger
Screen Resolution	800 x 600	1024 x 768 or higher
Internet Connectivity	Computers must be able to connect to the Internet via wired or wireless networks.	Computers connected to the Internet via wired networks.

TSM Requirements (cont.)

TSM		
Accommodation: None/TTS	Minimum	Recommended
Memory	1 GB RAM	1 GB RAM or greater
Processor	1 GHz	1 GHz or faster
Disk Space	10 GB available These TSM disk space requirements assume an average fixed-form item size of 2 MB and an average computer adaptive test (CAT) item pool size of 2 GB (shared across all CAT items)	15 GB or more available
Input Device Requirements	Keyboard – wired or wireless, Bluetooth, mouse, or touchpad To meet secure testing requirements, each Bluetooth or wireless keyboard must be configured to pair with only a single computer during testing.	
	The input device must allow students to: <ul style="list-style-type: none"> • Select/deselect • Drag • Highlight text, objects, and areas. • Enter letters, numbers, and symbols • Shift, tab, return, delete, and backspace 	
Other Devices	Headphones, earphones, ear buds, microphones	

Table 2-4: System Requirements for the TSM

Text-To-Speech (TTS) Configuration

The hardware and software requirements differ for TTS.

- Schools are responsible for supplying the headphones required for TTS.
- TTS requires a TSM with content caching and response caching.
- TTS does not run on remote or virtual configurations.
- TTS does not run on Windows Vista or Linux.

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, processor, disk space, memory, Internet connectivity, screen resolution, and so forth. As long as your site meets 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 unsupported 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.

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

Kiosk Mode and Security

The risk of running INSIGHT on unsupported operating systems and devices in a virtual or remote desktop environment is the loss of built-in security. When 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.

INSIGHT’s kiosk mode is not available for unsupported operating systems and devices. Sites using virtual computing technology for unsupported operating systems and devices must implement security measures to ensure that any virtual or remote desktops a student is using cannot access other applications while online assessments are being administered.

! **Important:** The configuration and installation information for iPad devices and Chromebooks will be supplied initially as a separate Appendix to this User Guide and will be available September 22, 2014. This information will include updated lists of supported operating systems and devices.

Native Operating Systems

The following table lists the supported operating systems on which INSIGHT runs natively, as well as unsupported operating systems.

Supported Operating Systems*	Unsupported Operating Systems
<ul style="list-style-type: none"> • Windows XP* • Windows Vista • Windows 7 • Windows 8 (including 8.1)** • Windows Server 2003 • Windows Server 2008 • Windows Server 2012 • Mac (OS X) 10.6*, 10.7, 10.8, 10.9 • Linux: Ubuntu 12.04 and 12.04.1 	<ul style="list-style-type: none"> • Other versions of Microsoft Windows and Mac (OS X) and Linux • Apple iOS • Google Chrome OS • Google Android • Other UNIX variants

*See “Support for Windows XP and Mac 10.6.8 (OS X)” on page 27.

**Only non-touch-screen versions of Windows are supported.

Native Devices

INSIGHT also supports many types of computer devices. However, not all devices work with all operating systems and vice-versa. The following table lists the devices that can currently run INSIGHT-supported operating systems natively if they meet the minimum system requirements.

Supported Devices	Unsupported Devices
<ul style="list-style-type: none">• Desktop Computers• Laptops• Netbooks• Servers	<ul style="list-style-type: none">• Phones• iPods• Chromebooks• Tablets

Virtual Desktop Operating Systems

Beside 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
<ul style="list-style-type: none">• Microsoft Windows• Mac (OS X)• Linux• nComputing vSpace	<ul style="list-style-type: none">• Google Chrome OS• Apple iOS• Google Android• PCoIP

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*
<ul style="list-style-type: none">• Desktop Computers• Laptops• Netbooks• Servers• Wyse Thin Clients and Wyse Zero Clients• nComputing Devices	<ul style="list-style-type: none">• Chromebooks*• Tablets*• Convertible devices and hybrid devices• Phones• iPods• Other UNIX devices

 Important: *Virtual desktop 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.

Enabling ClearType for Windows XP

For the secure browser to display screen font characters correctly on Microsoft Windows, ClearType should be turned on. ClearType is turned on by default for Windows Vista and Windows 7, but is turned off by default on Windows XP.

To turn on ClearType for screen fonts for Windows XP, perform the following steps:

1. Select **Start–Control Panel–Appearance and Themes–Display**.
2. On the Appearance tab, click **Effects**.
3. Select the **Use the following method to smooth edges of screen fonts** checkbox and click **ClearType** in the list.

ClearType Tools

The following Microsoft website provides tools to turn ClearType on or off and adjust the contrast:

<http://www.microsoft.com/typography/cleartype/cleartypeactivate.htm>

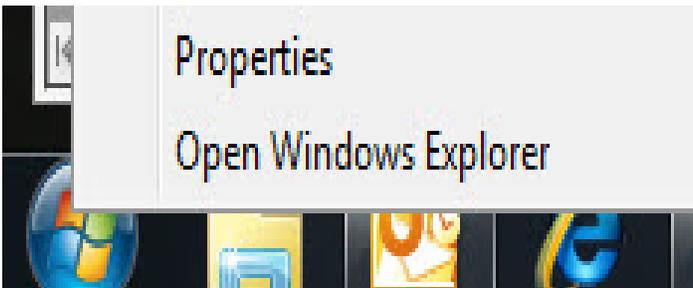
Windows 7/Windows XP Taskbar Security Requirement

During testing, each testing computer is locked down while INSIGHT is active to prevent the student from having access to outside information. For Windows 7 and Windows XP computers, you must be sure the **Auto-hide the taskbar** setting is turned off to secure the testing computer.

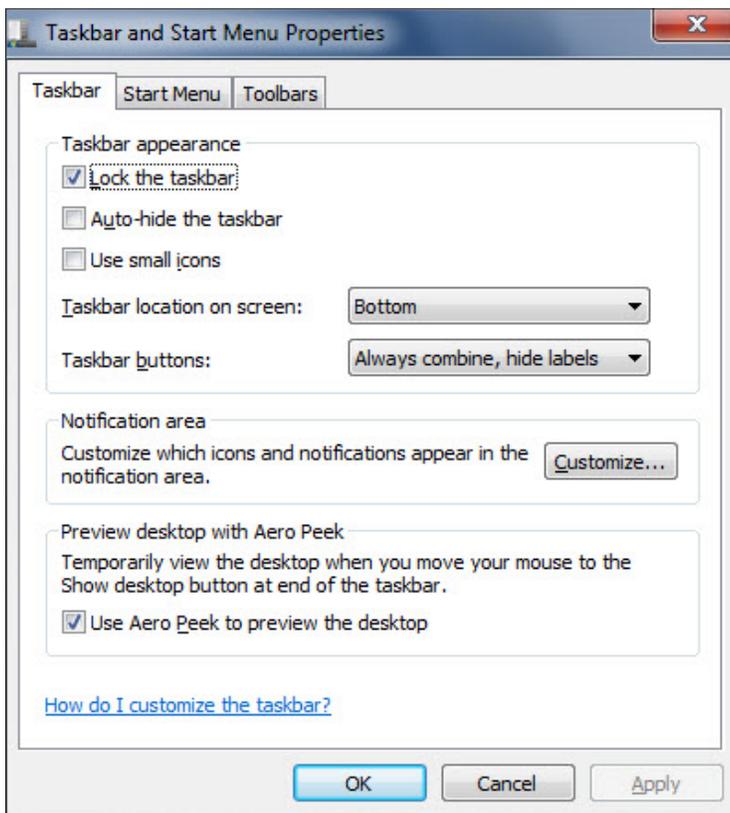
Windows 7 Computer

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).

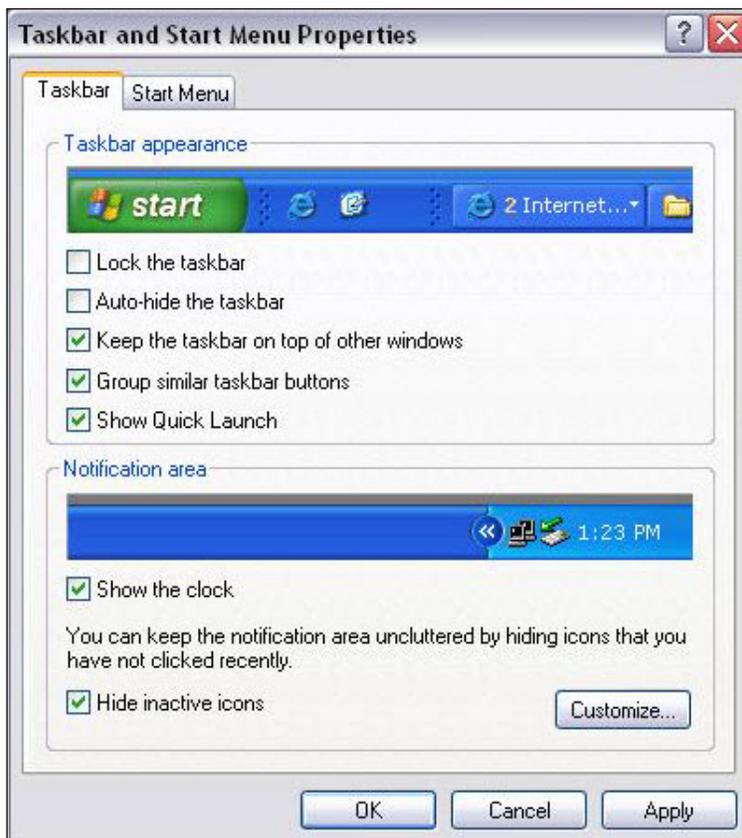


3. Click **Apply** to verify your change and **OK** to save it.

Windows XP Computer

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

1. Right-click 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.

■ Support for Windows XP and Mac 10.6.8 (OS X)

Microsoft ended support for Windows XP on April 8, 2014 (see <http://windows.microsoft.com/en-US/windows/end-support-help>). Apple unofficially ended support for Mac OS X level 10.6.8 (Snow Leopard) in September of 2013.

When a vendor ends support for an operating system, the operating system no longer receives security updates, which can present both large and immediate security and support risks to its users.

DRC is sensitive of client needs to provide online testing to as many students as possible and their desire to support older technical specifications.

To accomplish the dual goals of minimizing security risks to our clients while making necessary software changes, DRC has established a two-step support timeline for the transition away from Windows XP and Mac 10.6.8 to different operating system levels. DRC assumes no responsibility or liability for this transition or its outcome.

■ Best Effort Support

Between now and September 1, 2015, DRC will offer “best effort” support for Windows XP and Mac 10.6.8. Best effort support means that the DRC Support team will help troubleshoot issues reported concerning Windows XP or Mac 10.6.8 and DRC software applications as best we can—DRC cannot guarantee a resolution.

If a bug is uncovered, DRC Support will report the issue to DRC Development. Again, we cannot guarantee a fix, software update, or resolution timeline for software fixes or updates. If DRC determines that an issue is related to a client’s network, hardware, or third-party software, the client must obtain support directly from the software vendor or hardware manufacturer.

■ End of Support

After September 1, 2015, DRC will not support Windows XP or Mac 10.6.8 and they will be restricted from use with the next release of DRC software applications. Restricted from use means that the next release of DRC software applications will no longer work with Windows XP or Mac 10.6.8.

As a result, DRC strongly recommends that all clients affected begin the migration away from Windows XP and/or Mac 10.6.8 as soon as possible to allow sufficient time for this process.

Section Three: Windows Installation



■ What's Covered in This Section

This section describes the various methods of installing and uninstalling the Testing Site Manager (TSM) and INSIGHT on Windows operating systems. In addition, there are tips and techniques for troubleshooting TSM and INSIGHT installations.

The first part of this section provides basic information about installing and uninstalling a TSM and INSIGHT. Then, the section provides more advanced technical information about:

- Managing a TSM—starting, stopping, and uninstalling.
- Working with the TSM in a non-graphical (terminal) mode using Windows operating system commands.
- Uninstalling INSIGHT.

Because of the role that the TSM plays in testing, there are some special considerations regarding TSM software installation.

- The computer on which you install the TSM software should have a static IP address (an address that does not change when the computer is restarted or rebooted). If the IP address of a TSM machine changes, you must re-configure the testing computers that connect to that TSM.
- Install the TSM *before* you install INSIGHT so that you can specify the path to the TSM and the communication port during the INSIGHT installation.
- If you need to change the configuration of a TSM after it is installed, you must uninstall the TSM and install a new version. If you re-install a TSM after you have installed INSIGHT, you may need to re-configure the testing computers that connect to it.

Quick Tour 1: Installing a TSM for Windows OS

This Quick Tour describes how to install a TSM for Windows. DRC provides an easy-to-use wizard to install the TSM software.

1. To launch the wizard and start the installation, sign in to eDIRECT, select **Test Setup–General Information–Downloads**, and click on the **Testing Site Manager (TSM)** installer icon for Windows.

At this time, you also may want to download the INSIGHT Secure Browser Installer for Windows.

Note: If you have another version of the TSM installed, uninstall it before you install a new version (see “Uninstalling the TSM” on page 42).

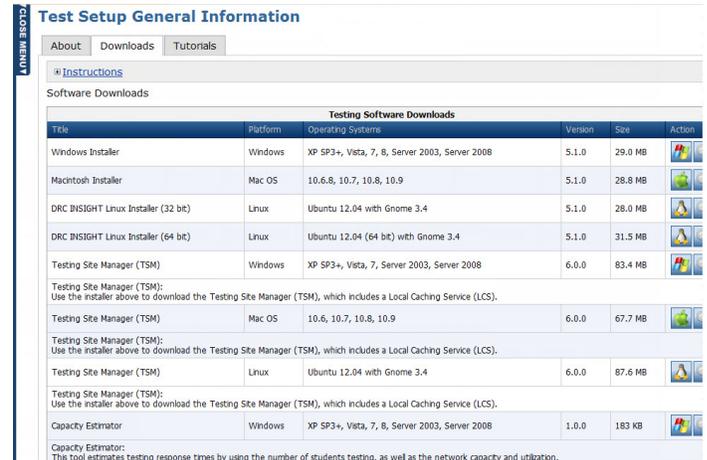
2. After you download the installation program, click on **TESTING_SITE_MANAGER_Setup.exe** to launch the wizard and start the installation.

The Welcome screen displays the Testing Site Manager (TSM) Setup Wizard. Click **Next** to continue.

Note: On most installation windows, you have the option of clicking **Back** to return to the previous window or **Next** to proceed to the next window. Some windows display other options.

3. The DRC INSIGHT License Agreement window displays. To continue the installation, you should read the agreement and select the option **I accept the agreement**. (If you do not accept the agreement, the installation ends.)

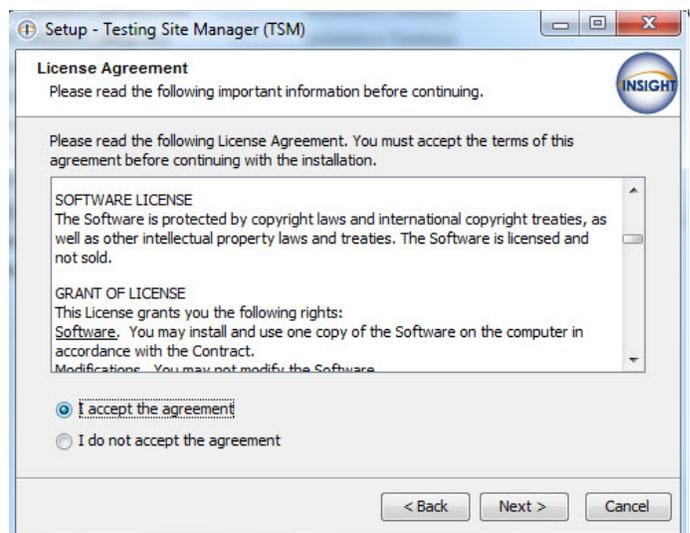
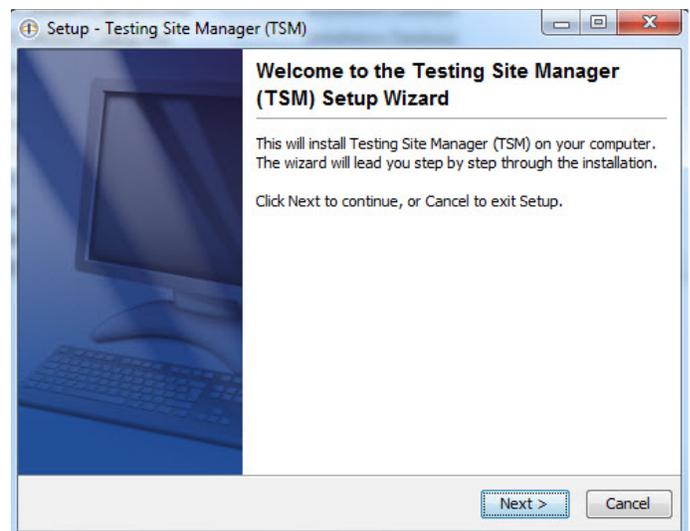
When the Next button becomes active, click **Next** to continue.



Test Setup General Information

Software Downloads

Testing Software Downloads					
Title	Platform	Operating Systems	Version	Size	Action
Windows Installer	Windows	XP SP3+, Vista, 7, 8, Server 2003, Server 2008	5.1.0	29.0 MB	
Macintosh Installer	Mac OS	10.6.8, 10.7, 10.8, 10.9	5.1.0	28.8 MB	
DRC INSIGHT Linux Installer (32 bit)	Linux	Ubuntu 12.04 with Gnome 3.4	5.1.0	28.0 MB	
DRC INSIGHT Linux Installer (64 bit)	Linux	Ubuntu 12.04 (64 bit) with Gnome 3.4	5.1.0	31.5 MB	
Testing Site Manager (TSM)	Windows	XP SP3+, Vista, 7, Server 2003, Server 2008	6.0.0	83.4 MB	
<small>Testing Site Manager (TSM): Use the installer above to download the Testing Site Manager (TSM), which includes a Local Caching Service (LCS).</small>					
Testing Site Manager (TSM)	Mac OS	10.6, 10.7, 10.8, 10.9	6.0.0	67.7 MB	
<small>Testing Site Manager (TSM): Use the installer above to download the Testing Site Manager (TSM), which includes a Local Caching Service (LCS).</small>					
Testing Site Manager (TSM)	Linux	Ubuntu 12.04 with Gnome 3.4	6.0.0	87.6 MB	
<small>Testing Site Manager (TSM): Use the installer above to download the Testing Site Manager (TSM), which includes a Local Caching Service (LCS).</small>					
Capacity Estimator	Windows	XP SP3+, Vista, 7, 8, Server 2003, Server 2008	1.0.0	183 KB	
<small>Capacity Estimator: The tool estimates testing response times by using the number of students testing, as well as the network capacity and utilization.</small>					



Quick Tour 1: Installing a TSM for Windows OS

- The Select Configuration Options window displays. On this window you specify whether to enable content caching and/or response caching. The default values are to enable both types of caching. After you make your selections, click **Next** to continue.

! **Important:** Install the TSM software on a computer that will be powered on when test content is automatically updated. If the computer is not on or is unavailable, it will not be updated. Whenever you restart a computer that has the TSM software installed, or anytime you plan to use the TSM for testing, verify that the TSM software and test content are up to date before you attempt to test (see “Content Caching” on page 88).

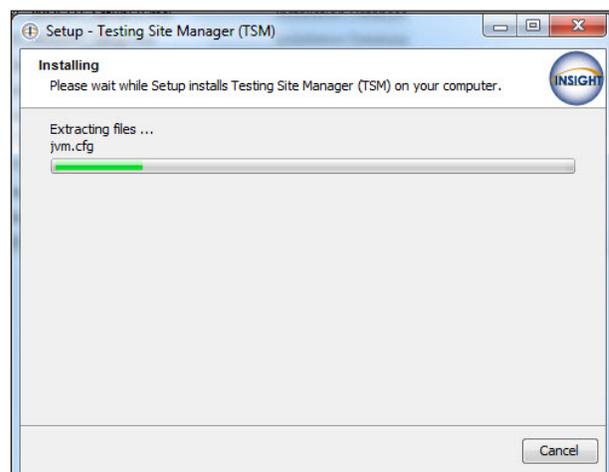
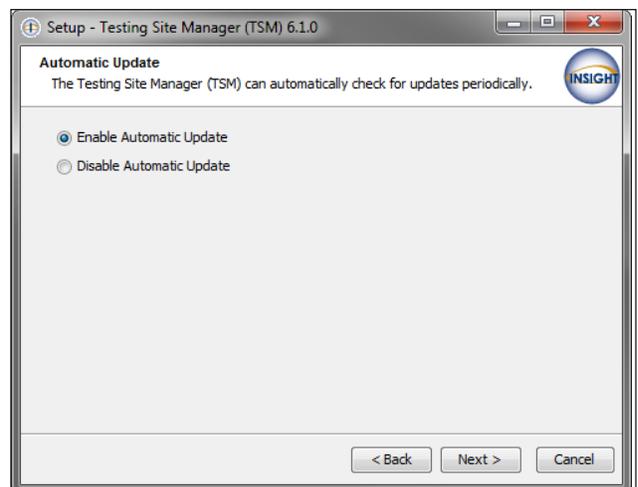
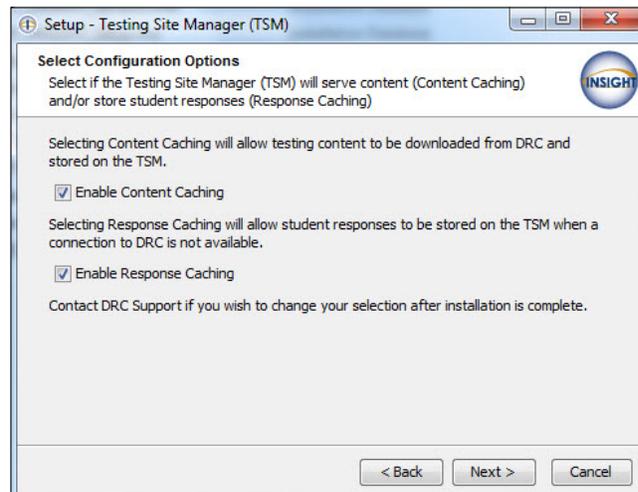
- The Automatic Update window displays. On this window, specify whether to enable automatic TSM software updates.

- If you select **Enable Automatic Update** (the default value), DRC updates the TSM software automatically.
- If you select **Disable Automatic Update**, DRC notifies you whenever an update to the TSM software is available and you must update the software manually.

! **Important:** To change the configuration of a TSM after it is installed, you must uninstall the TSM and install a new version. If you re-install a TSM after you have installed INSIGHT, you may need to re-configure the INSIGHT configuration properties for the testing computers that use the TSM (see “Setting DRC INSIGHT Properties” on page 129).

Click **Next** to continue.

- During the installation, a window displays to indicate the progress of the installation. If necessary, click **Cancel** to end the process.



Quick Tour 1: Installing a TSM for Windows OS

7. When the setup completes, the Setup Complete window displays. **Record the TSM server name and port numbers—you need this information when you install INSIGHT.** You can change the port numbers from this window.

- The TSM HTTP Port Number is the port number for regular communication.
- **The TSM HTTPS Port Number is the port number for encrypted communication that the INSIGHT secure web browser uses.**

! **Important:** To avoid potential conflicts, verify that no other device is using either port. For Windows 7, you can enter the command **netstat -a** from a command prompt to display the list of ports currently being used.

Click **Finish** when you are ready.

8. After the installation is complete, start the TSM from the Start menu by selecting **All Programs—TestingSiteManager—TestingSiteManager**.

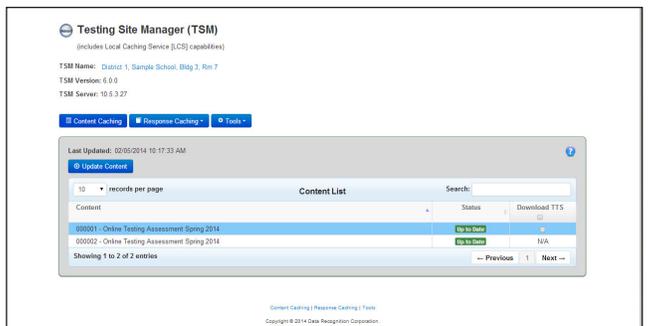
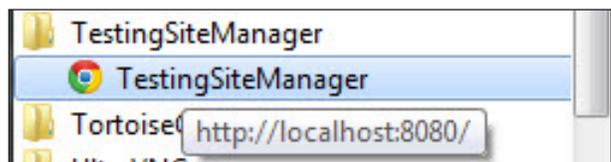
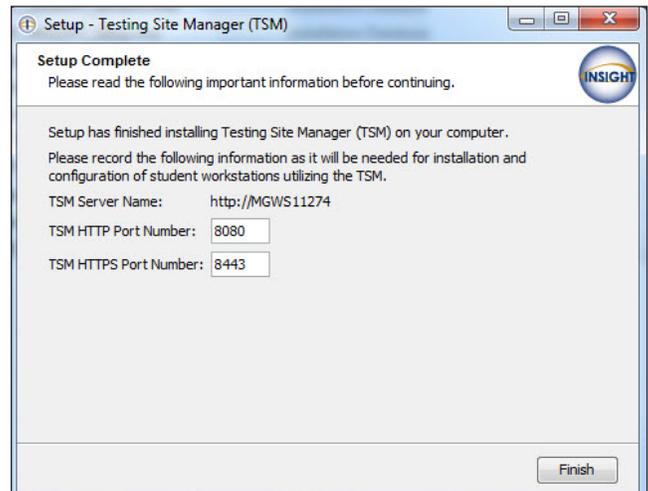
Note: When the TSM is first installed, the forms and items for all standard tests (no accommodations) are downloaded automatically. The TSM will not display until these forms and items are downloaded, which can take a few minutes.

9. When the Enter Testing Site Manager Name window displays, enter a name (up to 40 characters) that will help you remember the location of the TSM machine in the TSM Name field and click **Save**.

Note: DRC recommends that you include the district, school, and location (building and/or room number) of the TSM.

10. The TSM displays. If you specified Content Caching (Step 4), your test forms and items were downloaded with the TSM installation. If you are using accommodations, check the appropriate checkboxes to select the media content you need and click **Update Content** to load the latest test versions (see “Content Caching” on page 88).

You are ready to install INSIGHT.



Quick Tour 2: Installing INSIGHT for Windows OS

This Quick Tour describes how to install INSIGHT for Windows. DRC provides an easy-to-use wizard to install the software.

1. If the location used INSIGHT the previous year, you should uninstall the old version of the software first (see “Uninstalling INSIGHT” on page 46).

To launch the wizard and start the installation, sign in to eDIRECT, select **Test Setup–General Information–Downloads**, and click on the Windows Installer icon.

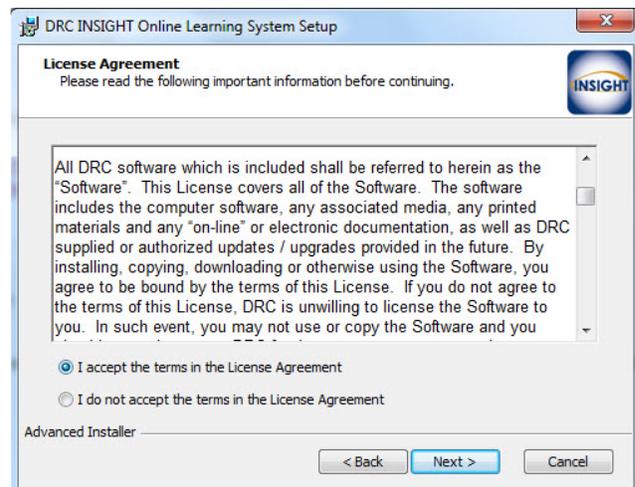
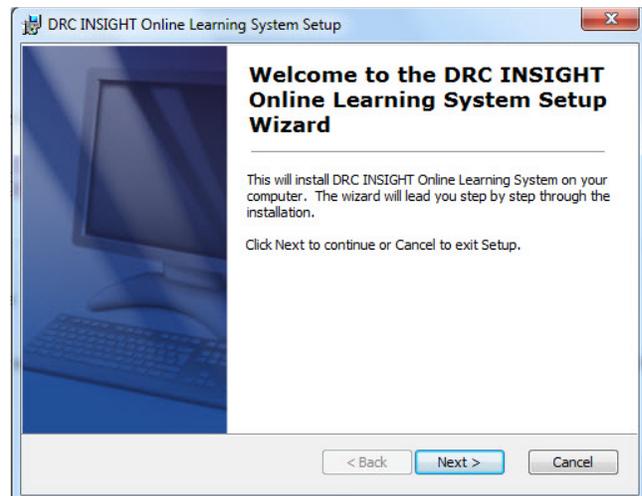
2. After you have downloaded the installation program, click on the **DRC_INSIGHT_Setup.msi** icon to start an installation.

The Welcome screen displays the DRC INSIGHT Online Learning System Setup Wizard. Click **Next** to continue.

Note: On most installation windows, you can click **Back** to return to the previous window or **Next** to proceed to the next window. Some windows display other options.

3. The DRC INSIGHT License Agreement window displays. To continue the installation, read the agreement and select the option **I accept the agreement**. (If you do not accept the agreement, the installation ends.)

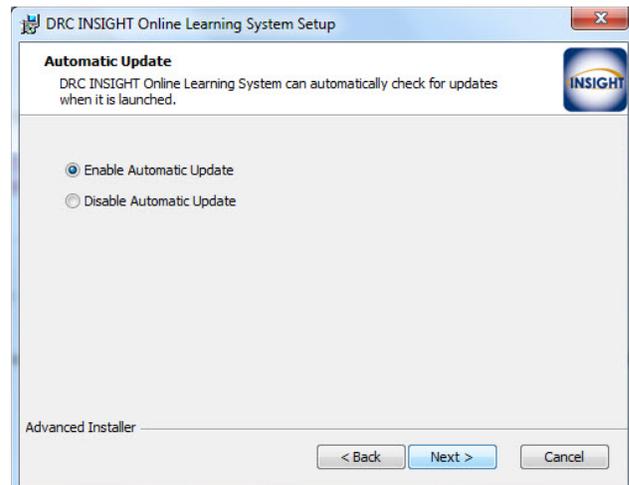
Click **Next** to continue when the Next button is active.



Quick Tour 2: Installing INSIGHT for Windows OS

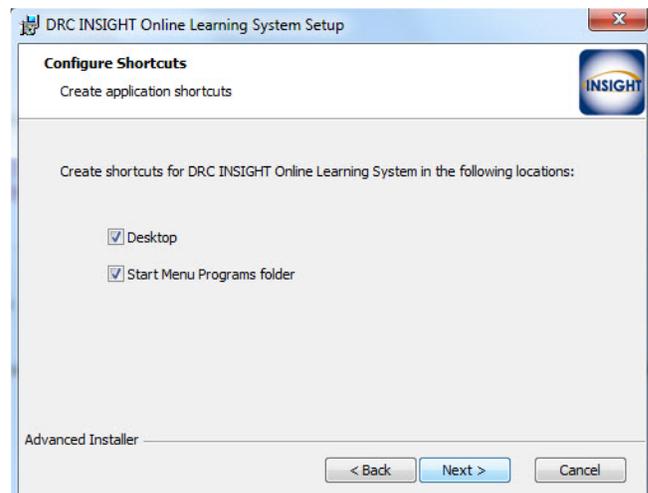
4. The Automatic Update window displays. You use this window to indicate whether to use automatic software updates. Select **Enable Automatic Update** to use automatic updates (recommended) or **Disable Automatic Update** to use manual updates.

Click **Next** to continue.

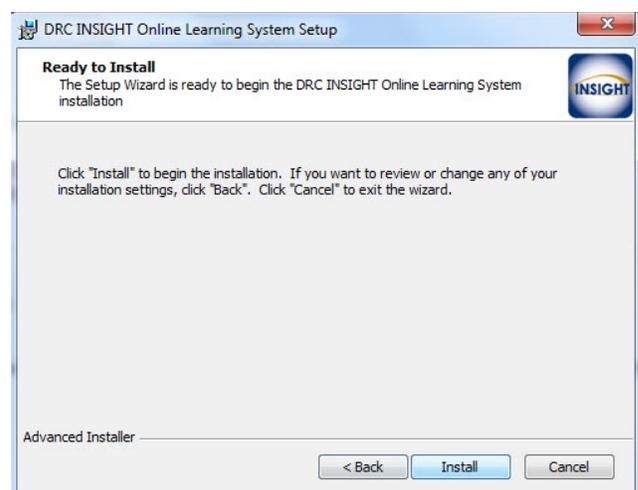


5. The Configure Shortcuts window displays. Use this window to indicate which shortcuts the installation process should create. DRC recommends that you select both shortcuts.

After you have made your selections, click **Next** to continue.

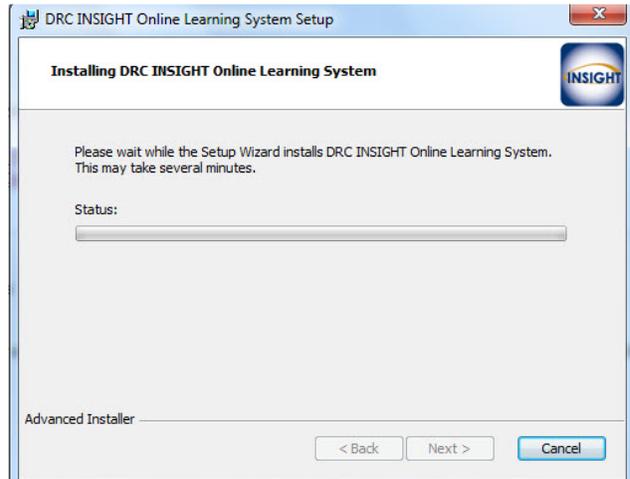


6. The Ready to Install window displays. Click **Back** to review or change your settings, **Install** to start the installation, or **Cancel** to cancel the process.



Quick Tour 2: Installing INSIGHT for Windows OS

7. While INSIGHT is being installed, a progress window indicates the state of the installation. If necessary, you can click **Cancel** to end the installation process.

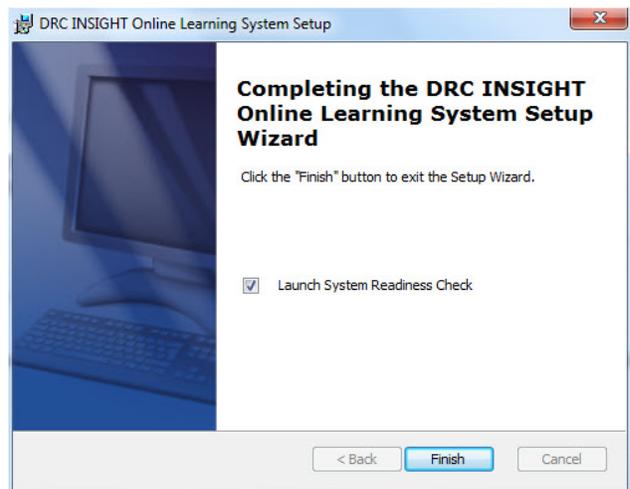


8. When the installation completes, the DRC INSIGHT Online Learning System Setup window displays indicating that INSIGHT is installed.

You can specify whether to run the System Readiness Check (the default value).

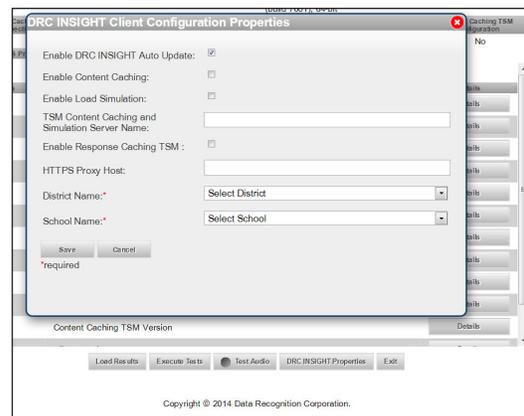
The System Readiness Check verifies that the testing computer has sufficient screen resolution, Internet connectivity, memory (RAM), and other technical specifications needed to perform online testing.

Make your selections and click **Finish** to end the installation process.



9. When the System Readiness Check launches, the System Information screen displays. You can see details about each test, execute the tests, and view the results (see "Using the System Readiness Check" on page 119).

If you installed one or more TSMs, you can connect to your TSM machines (see Steps 10 and 11). Otherwise, go to Step 11.



Quick Tour 2: Installing INSIGHT for Windows OS

10. To connect to a TSM, click **DRC Properties** to display the **DRC INSIGHT Client Configuration** window (see “Setting DRC INSIGHT Properties” on page 129 for details), enter your changes, and click **Save**.

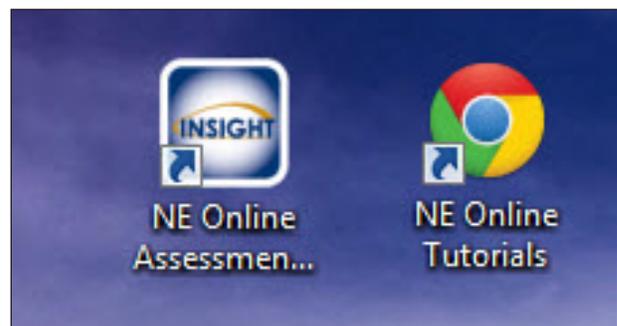
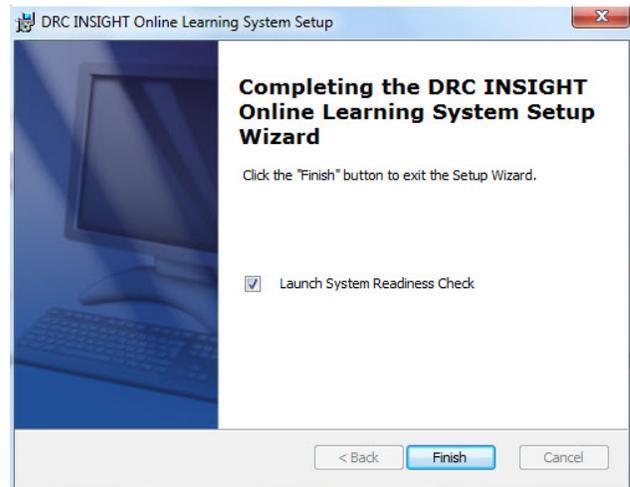
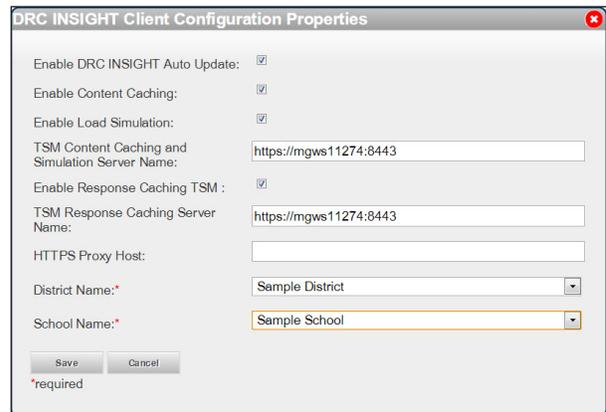
- If you specified Content Caching, check **Enable Content Caching**.
- If you want to perform load simulation testing, check **Enable Load Simulation**.

Enter the server name (or IP address) and port number of the TSM server in the **TSM Content Caching and Simulation Server Name** field.

- If you specified Response Caching, check **Enable Response Caching TSM** and enter the server name (or IP address) and port number of the TSM server in the **TSM Response Caching Server Name** field that displays (see “Quick Tour 1: Installing a TSM for Windows OS” on page 33, Step 7).

11. Select the district, and school for the testing computer (required) from the drop-down menus. This information is used for load simulation reports. Click **Save**.
12. Click **Execute Tests** to verify that the testing computer and any TSM(s) are configured correctly. Click **Details** next to any test you need more information about (see “Resolving System Readiness Required Tests” on page 125). When ready, click **Exit**.

13. The installation adds one or more shortcuts based on what you specified in Step 5. Use the Online Assessments shortcut to sign in to the Online Tools Training (OTT) or to a test using your INSIGHT log-in information. Use the Online Tutorials shortcuts to access test tutorials.



Managing the TSM

This section describes how to install a TSM from the command line, how to start and stop a TSM from a command line, and how to remove a TSM.

Installing a TSM from the Command Line

You can install a TSM in the Windows environment using the command line interface instead of the graphical interface. This type of installation is useful to install the software in unattended mode or to install it quickly on a number of computers.

To run the TSM installation in unattended mode, execute the `TESTING_SITE_MANAGER` command (see below) with the appropriate options. For Windows 7, the command file is located at `C:\Program Files (x86)\TestingSiteManager\TESTING_SITE_MANAGER.exe`.

TESTING_SITE_MANAGER -q

Figure 3–1 shows the list of setup options.

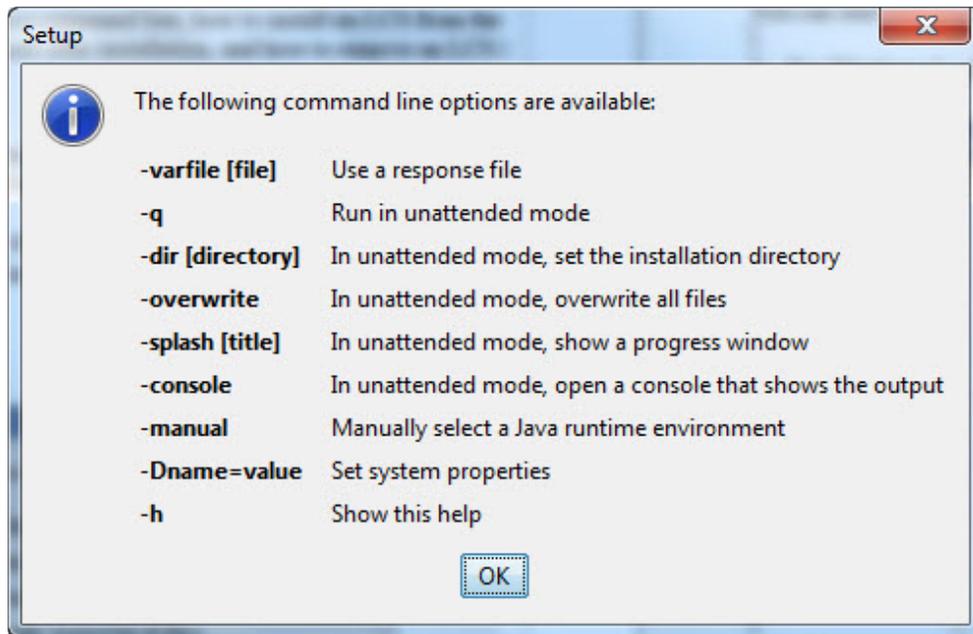
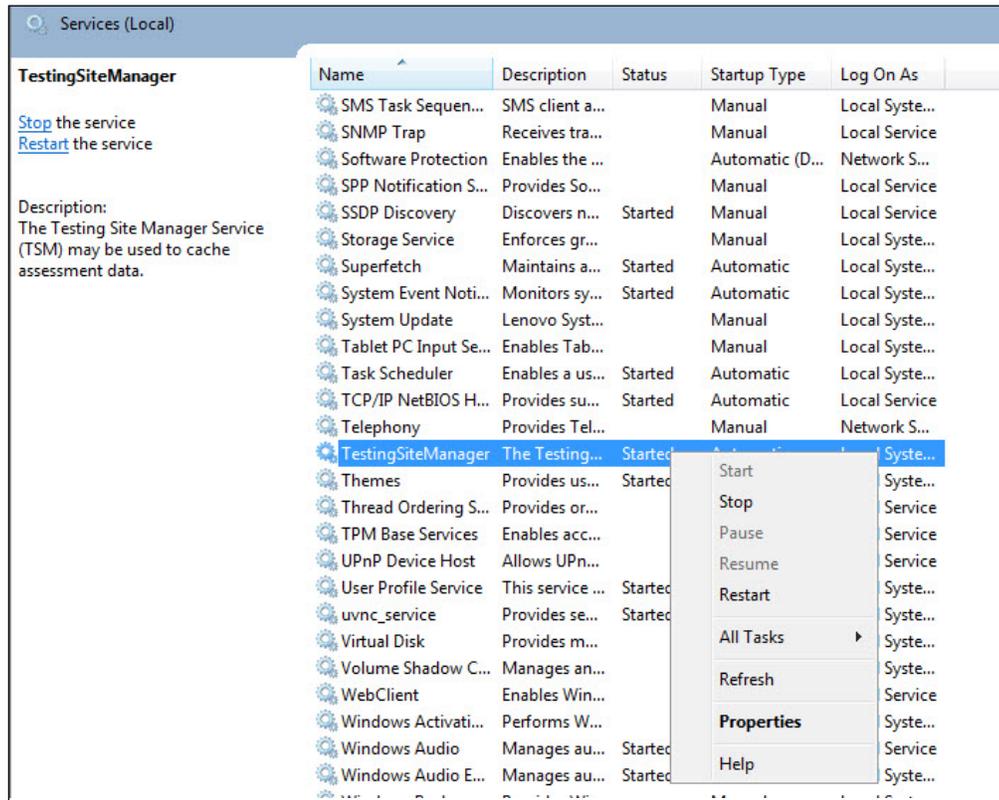


Figure 3–1: TSM Setup Command Options

Starting and Stopping the TSM

You can start and stop the TSM using the Control Panel.

1. For Windows 7, select **Control Panel–Administrative Tools–Services**.



2. The Services window displays. Select **TestingSiteManager**.
3. To stop the TSM, right-click and select **Stop**. To restart the TSM, right-click and select **Start**.

Uninstalling the TSM

You can uninstall (remove) the TSM using the Control Panel. If you want to uninstall the TSM, verify that there are no unsent responses. If there are, transmit them manually first. If the TSM has unsent stored responses, the uninstall won't finish (see "Viewing Unsent Student Test Responses" on page 91).

Note: If you have an LCS installed, you can use the same process to uninstall the LCS. You must uninstall the LCS before you install a TSM. If you cannot remove a TSM (or LCS), please contact DRC Technical Support.

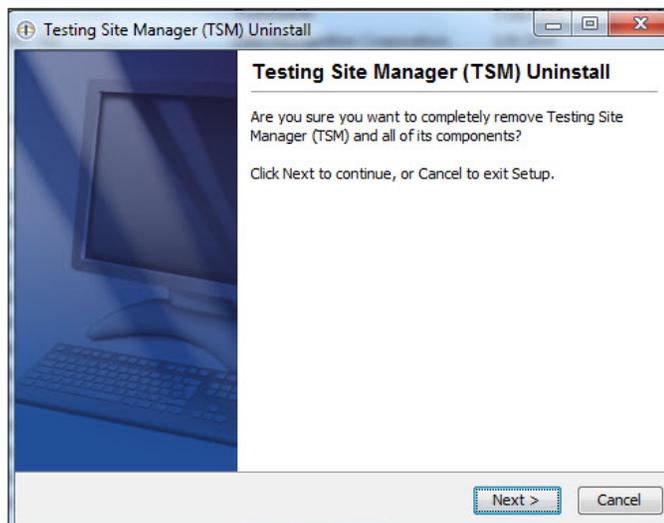
Using the Control Panel

To uninstall the TSM using the Control Panel, do the following:

1. Select **Uninstall a Program** and select **Testing Site Manager (TSM) – NE**.
2. Right-click and select **Uninstall/Change**.



3. Click **Next** when the Testing Site Manager (TSM) Uninstall wizard displays. The wizard walks you through the process.



Managing INSIGHT

This section describes how to install INSIGHT from a command line, how to start and stop INSIGHT and the System Readiness Check, and how to uninstall INSIGHT.

Installing INSIGHT from a Command Line

To install INSIGHT from a command line, execute the INSIGHT setup command—**DRC_INSIGHT_Setup.msi**—using the specific options you want to use.

To display a list of the command line options, use the **/h** (help) parameter with the setup command by selecting **Run...** and specifying **DRC_INSIGHT_Setup.msi -h**.

Figure 3–2 shows a list of the standard options.

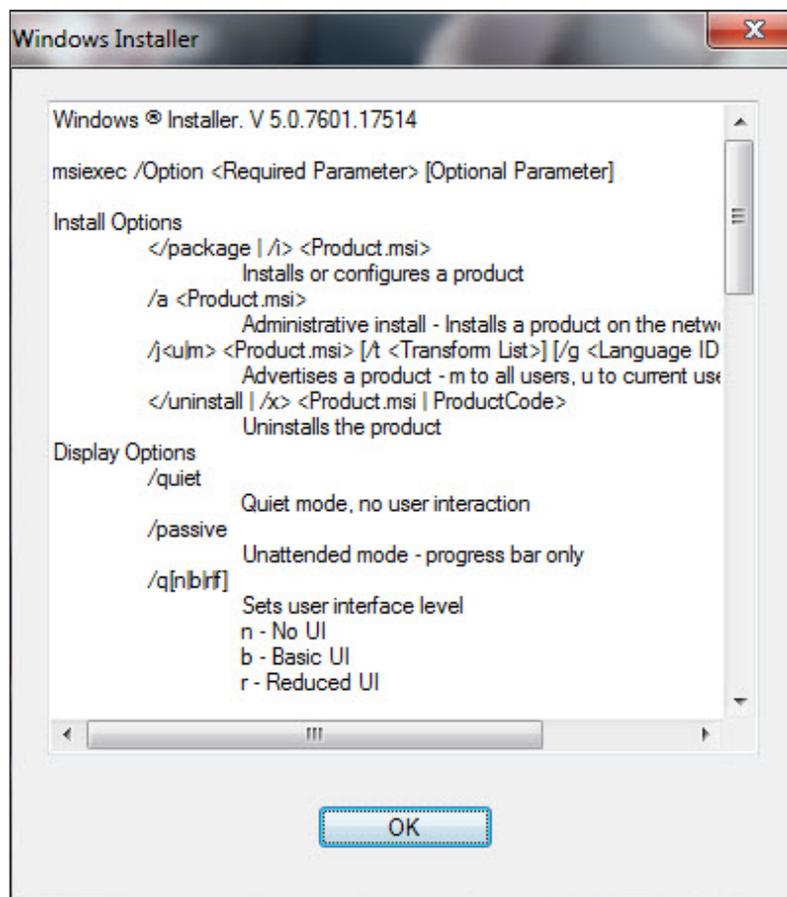


Figure 3–2: INSIGHT Setup Command Options

Refer to the Windows Installer Software Development Kit (SDK) for detailed information about the command line syntax.

INSIGHT Installation Program Options

The following table shows the custom properties that are available for the installation program.

!Important: Ignore the ADMINID and ADMINNAME properties in the DRC Configuration.json file.

Property/Switch	Description	Default Value
AUTOUPDATEFLAG	Enables and disables the automatic update feature.	true
ENABLELCS	Enables and disables a TSM for response caching. If true, include the LCSURL property to specify the TSM that will perform response caching.	false
LCSURL	The URL and secure port of the TSM server that caches test responses. Replace localhost with the name or IP address of the TSM server.	https://localhost:8443/
LOADSIMULATIONENABLE	Specifies that load simulation testing is enabled for the testing computer. If true, include the CONTENTCACHEENABLE property set to true and the CONTENTCACHE property to specify the TSM that will perform load simulation tests. You also must specify DISTRICT_NAME, DISTRICTID, SCHOOL_NAME, and SCHOOLID.	true
DISTRICT_NAME*	The district name for load simulation testing.	none
DISTRICTID*	The district ID for load simulation testing.	none
SCHOOL_NAME*	The school name for load simulation testing.	none
SCHOOLID*	The school ID for load simulation testing.	none
CONTENTCACHEENABLE	Enables and disables a TSM for content caching. If true, include the CONTENTCACHE property to specify the TSM that will perform content caching.	false
CONTENTCACHE	The URL and secure port of the TSM server that caches test content and performs load simulation tests. Replace localhost with the name or IP address of the TSM server.	https://localhost:8443/
HTTPSPROXY	The URL and port of the proxy host server. Depending on your configuration, this URL can start with either http:// or https://.	blank
/qn (/qb for Windows 8)	Runs the installation in silent mode.	NA

*Use the name and/or numeric code from the locations file located at <https://ne-insight.drcdirect.com/InsightClientRESTServices/ClientRESTService.svc/locations> (see below).

Using the Locations File

To locate district and school names and IDs, do the following:

1. Paste the locations file link into a browser and open it (download the file into a text editor if necessary).
2. Search for the string **district_name** to locate the district name and ID (to the left).
3. Search for the string **school_name** to locate the school name and ID (see below).

```
{“districtid”：“88888”,“district_name”：“Sample District”,“schools”:{“schoolid”：“8888”,“school_name”：“Sample School”}}
```

Installation Command Syntax and Example

The following is the syntax for the install program command:

```
DRC_INSIGHT_Setup.msi <properties> <MSI switches>
```

Note: All properties are passed in a *key=value* format (see the Example).

Example

The following example installs the software in silent mode (the /qn switch [/qb for Windows 8]). It specifies the TSM location for each type of caching—response and content, enables load simulation testing and automatic software updates, and specifies a school district, school, and proxy host.

```
msiexec /i DRC_INSIGHT_Setup.msi /qn CONTENTCACHEENABLE="true"  
LOADSIMULATIONENABLE="true" AUTOUPDATEFLAG="true" ENABLELCS="true"  
DISTRICT_NAME="Sample District" DISTRICTID="88888" LCSURL="https://10.3.97.11:8443"  
CONTENTCACHE="https://10.3.97.11:8443" SCHOOLID="8888" SCHOOL_NAME="Sample  
School" HTTPSPROXY="http://10.3.98.61:8081"
```

Note: To see the other MSIEXEC properties and switches that you can use with the installation application, refer to the Microsoft Command Line options page.

Starting INSIGHT

You can start INSIGHT and the System Readiness Check from a testing computer using the desktop shortcut, the Windows Start menu, or the Windows Explorer. For Windows 7, start the Explorer and select the installation drive—**Program Files (x86)–NE Online Assessments–DRCInsight.exe** for INSIGHT, or **Readiness** for the System Readiness Check.

Stopping INSIGHT

If INSIGHT becomes unresponsive, a NeSA-Technology Assessment Coordinator (N-TAC) can stop it by using the Windows Task Manager. To start the Task Manager, press **Ctrl-Alt-Delete** and select **Task Manager** (see Figure 3–3).

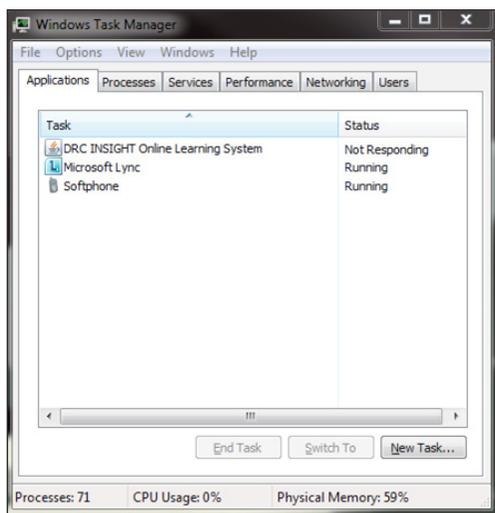


Figure 3–3: Task Manager – Windows 7 Environment

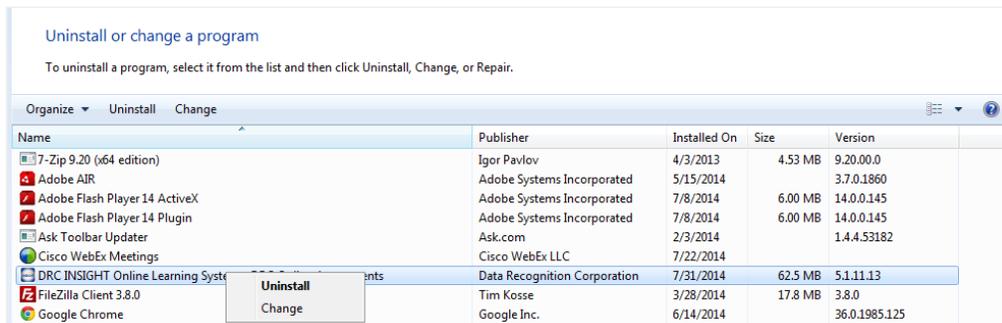
Uninstalling INSIGHT

You can uninstall (remove) INSIGHT from a Windows machine by using the Control Panel or the Start menu.

Note: If you cannot remove INSIGHT, please contact Nebraska Customer Support at 866-342-6280.

Using the Control Panel

To uninstall INSIGHT using the Control Panel, select **Uninstall a Program** and select **DRC INSIGHT Online Learning System–NE Online Assessments**, right-click and select **Uninstall**.



Using the Start Menu

To uninstall INSIGHT using the Start Menu, select **All Programs–NE Online Assessments–DRC INSIGHT Uninstaller** and click **Yes** when the Windows Installer dialog box displays.

Section Four: Mac (OS X) Installation



■ What's Covered in This Section

This section describes the installation process in a Mac (OS X) environment.

First, it provides basic information about installing and uninstalling a Testing Site Manager (TSM) and INSIGHT using the standard Mac graphical interface. Then, the section provides more advanced technical information about:

- Managing a TSM: starting, stopping, and uninstalling.
- Working with a TSM in a non-graphical (terminal) mode using Mac (OS X) operating system commands.
- Uninstalling INSIGHT.

■ Installing a TSM

Because of the role that the TSM plays in testing, there are some special considerations regarding TSM software installation.

- The computer on which you install the TSM software should have a static IP address (an address that does not change when the computer is restarted or rebooted). If the IP address of a TSM machine changes, you must re-configure the testing computers that connect to that TSM.
- You should install the TSM *before* you install INSIGHT so that you can specify the path to the TSM and the communication port during the INSIGHT installation.
- If you need to change the configuration of a TSM after it is installed, you must uninstall the TSM and install a new version. If you re-install a TSM after you have installed INSIGHT, you may need to re-configure the testing computers that connect to it.

Quick Tour 3: Installing a TSM for Mac OS (OS X)

This Quick Tour describes how to install a TSM in the Mac (OS X) environment. DRC provides an easy-to-use wizard to install the TSM software.

1. To launch the wizard and start the installation, sign in to eDIRECT, select **Test Setup–General Information–Downloads**, and click on the **Testing Site Manager (TSM) installer icon** for Mac OS.

Note: If you have another version of the TSM installed, uninstall it before you install a new version (see “Uninstalling the TSM” on page 56).

At this time, you also may want to download the Macintosh Installer for INSIGHT.

2. After you have downloaded the installation program, double-click on the **TESTING_SITE_MANAGER_Setup.dmg** file and double-click on the **Testing Site Manager (TSM) Installer** to start the installation.

Note: You must be a Mac System Administrator to install the TSM from this file.

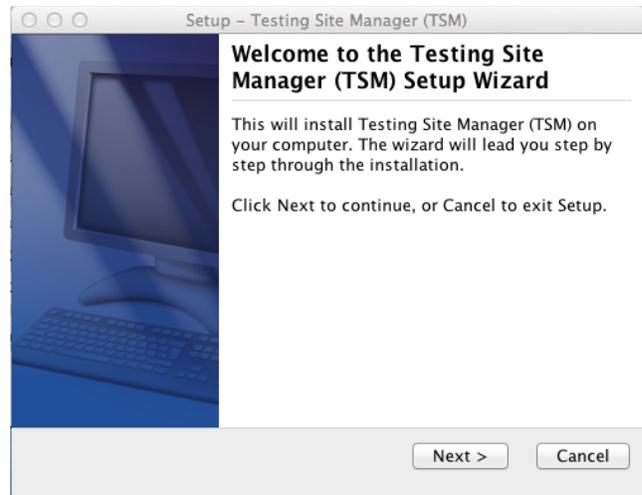
3. The Welcome screen displays for the Testing Site Manager (TSM) Setup Wizard.

Note: On most of the installation windows, you have the option of clicking **Back** to return to the previous window, **Next** to proceed to the next window, and **Cancel** to cancel the installation. Some windows display other options. Click **Next** to continue.

4. The DRC INSIGHT License Agreement windows displays. Read the agreement and select the option **I accept the agreement**. When the Next button becomes active, click **Next** to continue.

The screenshot shows a web page titled "Test Setup General Information" with tabs for "About", "Downloads", and "Tutorials". The "Downloads" tab is active, displaying a table of software downloads. The table has columns for Title, Platform, Operating Systems, Version, Size, and Action. The table lists several installers for Windows, Mac OS, and Linux, including the Testing Site Manager (TSM) for each platform.

Title	Platform	Operating Systems	Version	Size	Action
Windows Installer	Windows	XP SP3+, Vista, 7, 8, Server 2003, Server 2008	5.1.0	29.0 MB	[Icon]
Macintosh Installer	Mac OS	10.6.8, 10.7, 10.8, 10.9	5.1.0	28.8 MB	[Icon]
DRC INSIGHT Linux Installer (32 bit)	Linux	Ubuntu 12.04 with Gnome 3.4	5.1.0	28.0 MB	[Icon]
DRC INSIGHT Linux Installer (64 bit)	Linux	Ubuntu 12.04 (64 bit) with Gnome 3.4	5.1.0	31.5 MB	[Icon]
Testing Site Manager (TSM)	Windows	XP SP3+, Vista, 7, Server 2003, Server 2008	6.0.0	63.4 MB	[Icon]
Testing Site Manager (TSM)	Mac OS	10.6, 10.7, 10.8, 10.9	6.0.0	67.7 MB	[Icon]
Testing Site Manager (TSM)	Linux	Ubuntu 12.04 with Gnome 3.4	6.0.0	67.6 MB	[Icon]
Capacity Estimator	Windows	XP SP3+, Vista, 7, 8, Server 2003, Server 2008	1.0.0	183 KB	[Icon]



Quick Tour 3: Installing a TSM for Mac OS (OS X)

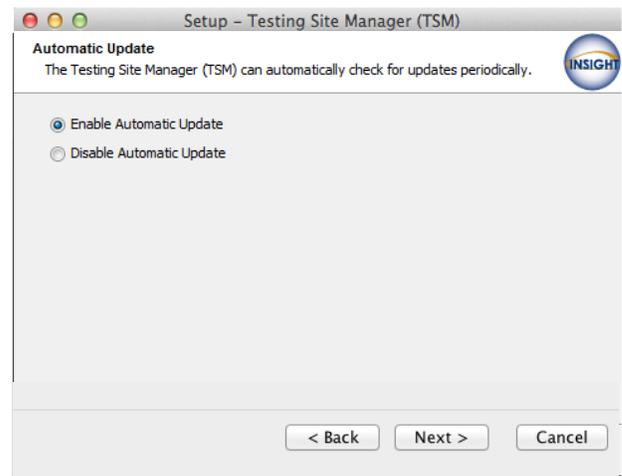
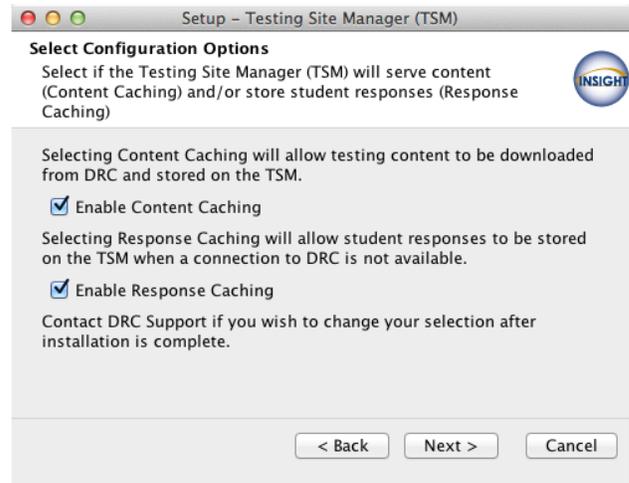
- The Select Configuration Options window displays. On this window you specify whether to enable content caching and/or response caching. The default values are to enable both types of caching. After you make your selections, click **Next** to continue.

! Important: Install the TSM software on a computer that will be powered on when the TSM software or test content is automatically updated. If the computer is not on or is unavailable, it will not be updated. Whenever you restart a computer that has the TSM software installed, or anytime you plan to use the TSM for testing, verify that the TSM software and test content are up to date before you attempt to test (see “Content Caching” on page 88).

- The Automatic Update window displays. On this window, specify whether to enable automatic TSM software updates.
 - If you select **Enable Automatic Update** (the default value), DRC updates the TSM software automatically.
 - If you select **Disable Automatic Update**, DRC notifies you whenever an update to the TSM software is available and you must update the software manually.

! Important: To change the configuration of a TSM after it is installed, you must uninstall the TSM and install a new version. If you re-install a TSM after you have installed INSIGHT, you may need to re-configure the INSIGHT configuration properties for the testing computers that use the TSM (“Setting DRC INSIGHT Properties” on page 129).

After you have made your selection, click **Next** to start the installation. During the installation, a window displays to indicate the progress of the installation. If necessary, you can click **Cancel** to end the installation process.



Quick Tour 3: Installing a TSM for Mac OS (OS X)

7. When the installation completes, the Setup Complete window displays. **Record the TSM server name and port numbers—you need this information when you install INSIGHT.** You can change the port numbers from this window.

- The TSM HTTP Port Number is the port number for regular communication.
- **The TSM HTTPS Port Number is the port number for encrypted communication that the INSIGHT secure web browser uses.**

! **Important:** To avoid potential conflicts, verify that no other device is using either port.

Click **Finish** when you are ready.

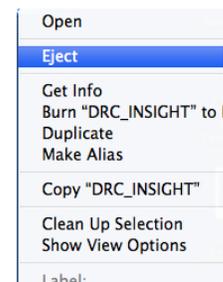
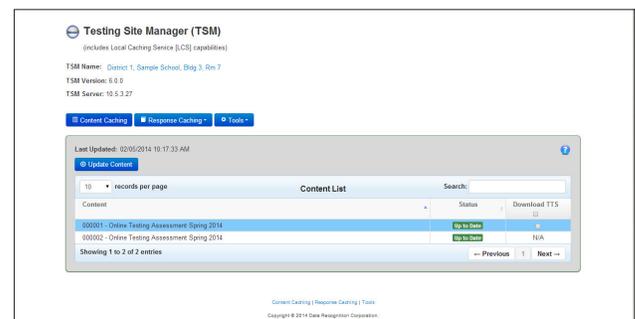
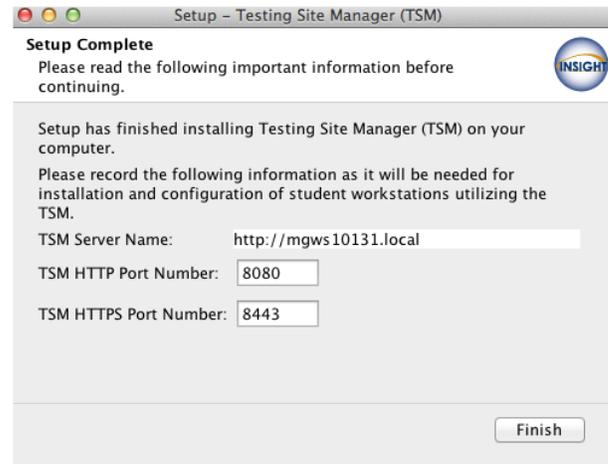
8. Start the TSM by selecting **Applications–TestingSiteManager–TestingSiteManager.url**.

Note: When the TSM is first installed, the forms and items for all standard tests (no accommodations) are downloaded automatically. The TSM will not display until these forms and items are downloaded, which could take a few minutes.

When the **Enter Testing Site Manager Name** window displays, enter a name in the TSM Name field to help you remember the location of the TSM machine. DRC recommends that you include the district, school, and location (building and/or room number) of the TSM. Click **Save**.

Note: The name is limited to 40 characters with no special formatting requirements.

9. The TSM displays and you are ready to install INSIGHT. After installation is complete, select the **TESTING_SITE_MAN** volume from the desktop, right-click on it (**Ctrl-click**) and select **Eject** to unmount the volume and avoid potential conflicts with automatic updates.



Quick Tour 4: Installing INSIGHT for Mac OS (OS X)

This Quick Tour describes how to install INSIGHT on a Mac. DRC provides an easy-to-use wizard to install the software.

1. If the location used INSIGHT the previous year, you should uninstall the old version of the software first (see “Uninstalling INSIGHT” on page 59).

Download the dedicated installer for the Mac (OS X) operating system, DRC_INSIGHT_Setup.pkg, that DRC created. Sign in to eDIRECT, select **Test Setup–General Information–Downloads**, and click on the Macintosh Installer icon.

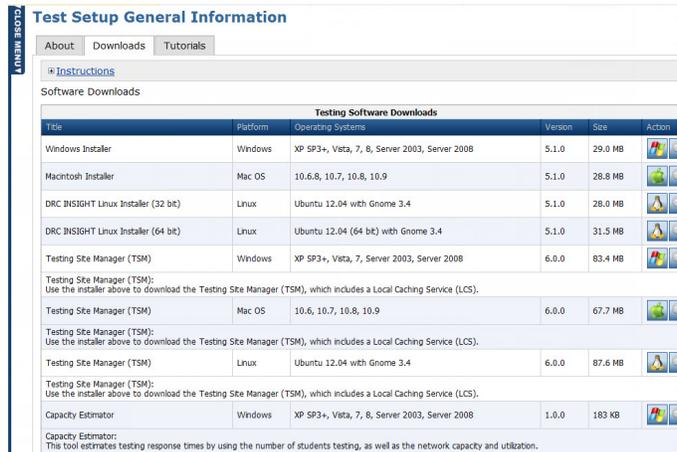
2. Double-click on the downloaded **DRC_INSIGHT_Setup.pkg** file to start the wizard.

Note: You must be a Mac System Administrator to install INSIGHT.

3. The Welcome screen for the DRC INSIGHT Online Assessments Installer displays.

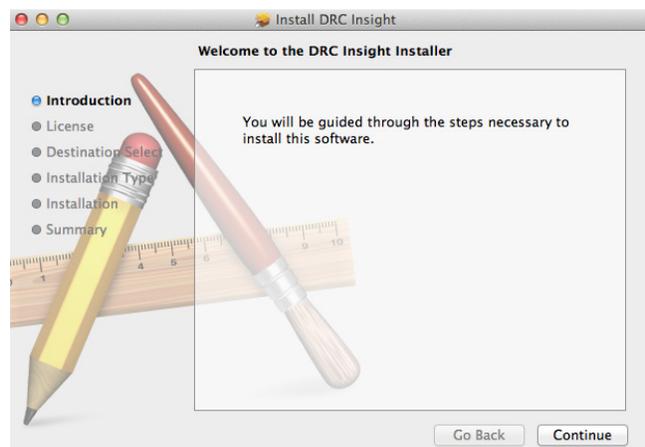
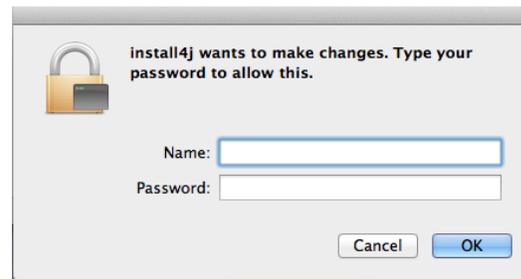
Note: On most installation windows, you can click **Go Back** to return to the previous window, **Continue** to proceed to the next window, or **Cancel** to cancel the installation. Some windows display other options.

Click **Continue**.



The screenshot shows a web interface titled "Test Setup General Information" with tabs for "About", "Downloads", and "Tutorials". The "Downloads" tab is active, showing a table of software downloads. The table has columns for Title, Platform, Operating Systems, Version, Size, and Action. The table lists several installers for Windows, Mac OS, and Linux, including Windows Installer, Macintosh Installer, DRC INSIGHT Linux Installer (32 bit), DRC INSIGHT Linux Installer (64 bit), Testing Site Manager (TSM) for Windows, Mac OS, and Linux, and Capacity Estimator.

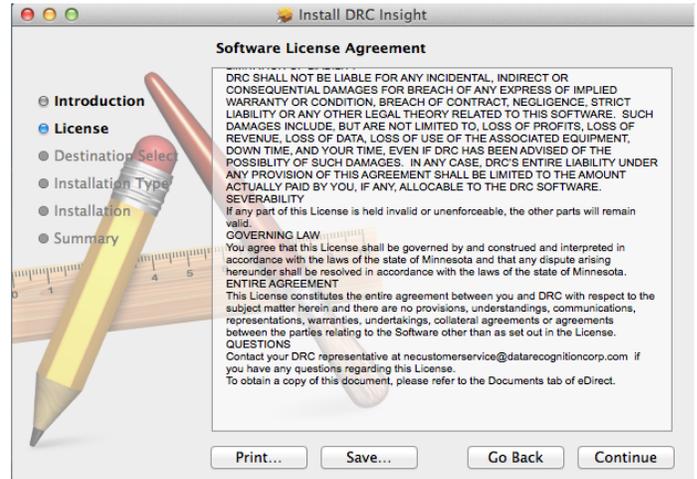
Testing Software Downloads					
Title	Platform	Operating Systems	Version	Size	Action
Windows Installer	Windows	XP SP3+, Vista, 7, 8, Server 2003, Server 2008	5.1.0	29.0 MB	
Macintosh Installer	Mac OS	10.6.8, 10.7, 10.8, 10.9	5.1.0	28.8 MB	
DRC INSIGHT Linux Installer (32 bit)	Linux	Ubuntu 12.04 with Gnome 3.4	5.1.0	28.0 MB	
DRC INSIGHT Linux Installer (64 bit)	Linux	Ubuntu 12.04 (64 bit) with Gnome 3.4	5.1.0	31.5 MB	
Testing Site Manager (TSM)	Windows	XP SP3+, Vista, 7, Server 2003, Server 2008	6.0.0	83.4 MB	
Testing Site Manager (TSM): Use the installer above to download the Testing Site Manager (TSM), which includes a Local Caching Service (LCS).					
Testing Site Manager (TSM)	Mac OS	10.6, 10.7, 10.8, 10.9	6.0.0	67.7 MB	
Testing Site Manager (TSM): Use the installer above to download the Testing Site Manager (TSM), which includes a Local Caching Service (LCS).					
Testing Site Manager (TSM)	Linux	Ubuntu 12.04 with Gnome 3.4	6.0.0	87.6 MB	
Testing Site Manager (TSM): Use the installer above to download the Testing Site Manager (TSM), which includes a Local Caching Service (LCS).					
Capacity Estimator	Windows	XP SP3+, Vista, 7, 8, Server 2003, Server 2008	1.0.0	183 KB	
Capacity Estimator: This tool estimates testing response times by using the number of students testing, as well as the network capacity and utilization.					



Quick Tour 4: Installing INSIGHT for Mac OS (OS X)

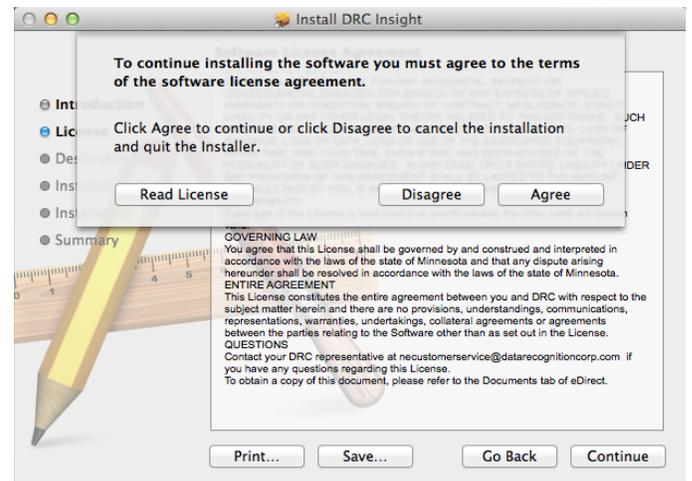
- The Software License Agreement window displays. You can read through the Agreement and select a different language from the Language drop-down menu.

To continue the installation, scroll down and read the agreement and click **Agree**, or click **Save**.



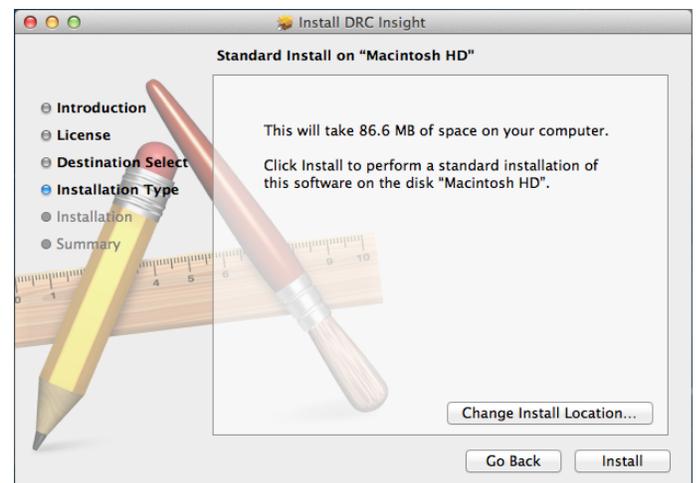
If you click Continue without reading the agreement or clicking **Save**, a window displays to verify your choice and explain the options.

To continue, click **Agree** and **Continue**.



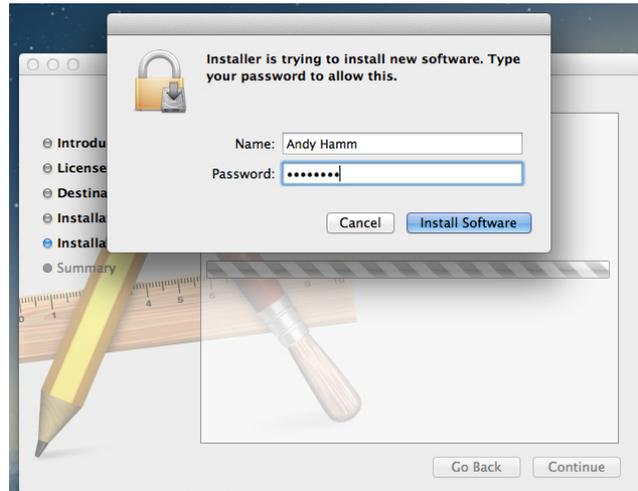
- The Standard Install on "Macintosh HD" window displays, indicating the amount of disk space the installation will require.

To use the default location, click **Install**.



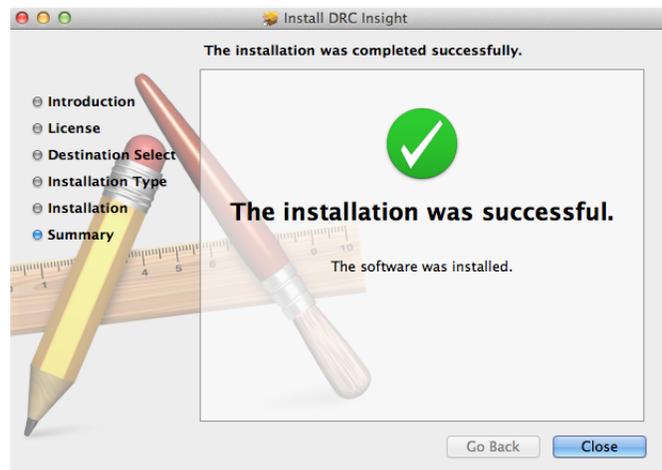
Quick Tour 4: Installing INSIGHT for Mac OS (OS X)

- The installation begins. You must be a Mac System Administrator to install INSIGHT.



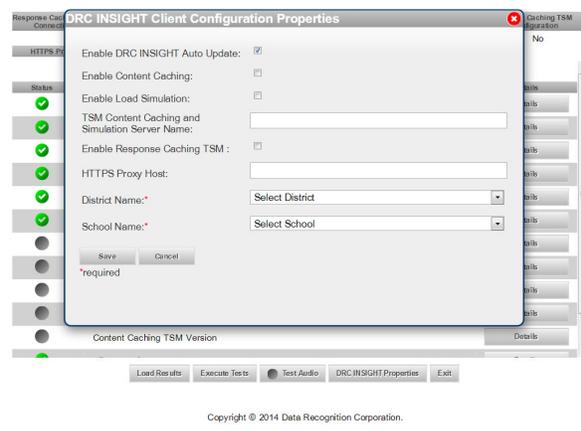
- After the installation, a summary window indicates the status of the installation.

If the installation was successful, click **Close**. Otherwise, if necessary, click **Go Back** to change your installation options.



- When you click **Close**, the System Readiness Check automatically runs and the System Information page displays the results (see "What is the System Readiness Check?" on page 118).

If you installed one or more TSMs, you can connect to your TSM machines (see Steps 9 and 10). Otherwise, go to Step 10.



Quick Tour 4: Installing INSIGHT for Mac OS (OS X)

9. To connect to a TSM, click **DRC Properties** to display the **DRC INSIGHT Client Configuration** window (see “Setting DRC INSIGHT Properties” on page 129 for details), enter your changes, and click **Save**.

- If you specified Content Caching, check **Enable Content Caching**.
- If you want to perform load simulation testing, check **Enable Load Simulation**.

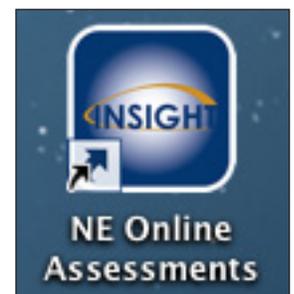
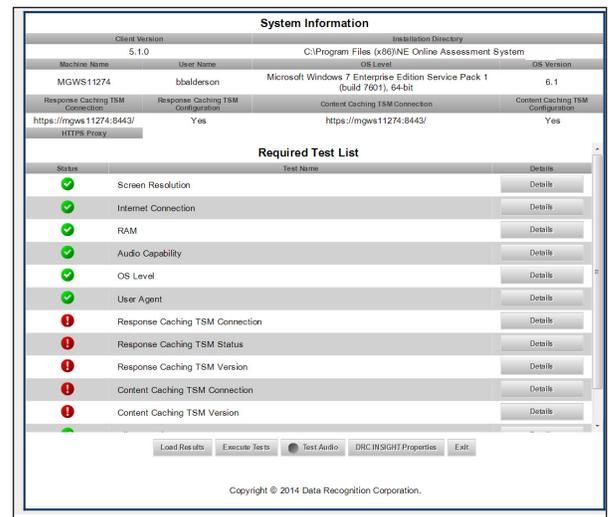
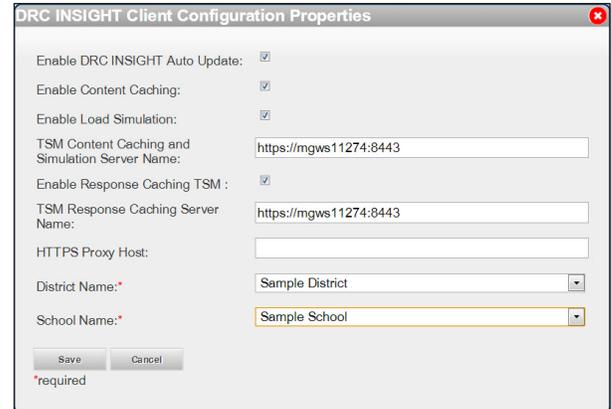
Enter the server name (or IP address) and port number of the TSM server in the **TSM Content Caching and Simulation Server Name** field.

- If you specified Response Caching, check **Enable Response Caching TSM** and enter the server name (or IP address) and port number of the TSM server in the **TSM Response Caching Server Name** field that displays (see Step 7 of “Quick Tour 3: Installing a TSM for Mac OS (OS X)” on page 49).

10. Select the district and school for the testing computer (required) from the drop-down menus. This information is used for load simulation reports. Click **Save**.

11. Click **Execute Tests** to verify that the testing computer and any TSM(s) are configured correctly. Click the **Details** button next to any test that you need more information about (see “Resolving System Readiness Required Tests” on page 125). When you are ready, click **Exit**.

12. The installation adds two shortcuts to the desktop. Use the Online Assessments shortcut to sign in to the Online Tools Training (OTT), or to a test, using your INSIGHT log-in information. Use the Online Tutorials shortcut to access test tutorials.



Managing the TSM

This section describes how to start and stop a TSM from a command line, and how to uninstall a TSM.

Starting and Stopping the TSM

The TSM is a service that executes in the background without a standard graphical window. NeSA-Technology Assessment Coordinators (N-TACs) should be familiar with starting and stopping the TSM with the TESTING_SITE_MANAGER script. You can use the **launchd** and **launchctl** commands to manage services. By default, the TSM is started after installation and launches anytime the computer is booted.

Uninstalling the TSM

You can uninstall (remove) the TSM by selecting **Applications–TestingSiteManager–Testing Site Manager (TSM) Uninstaller**. First, you must enter your Mac administrator login information. Then, when the Testing Site Manager (TSM) Uninstall wizard displays, click **Next**.

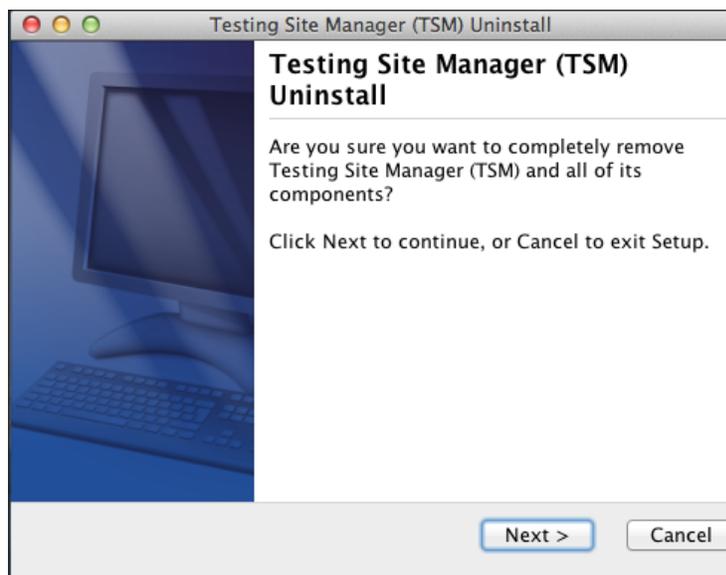


Figure 4–1: Uninstalling the TSM

Note: If you cannot remove a TSM, please contact DRC Technical Support.

Managing INSIGHT

This section describes how to install INSIGHT from a command line, how to start and stop INSIGHT, and how to uninstall INSIGHT.

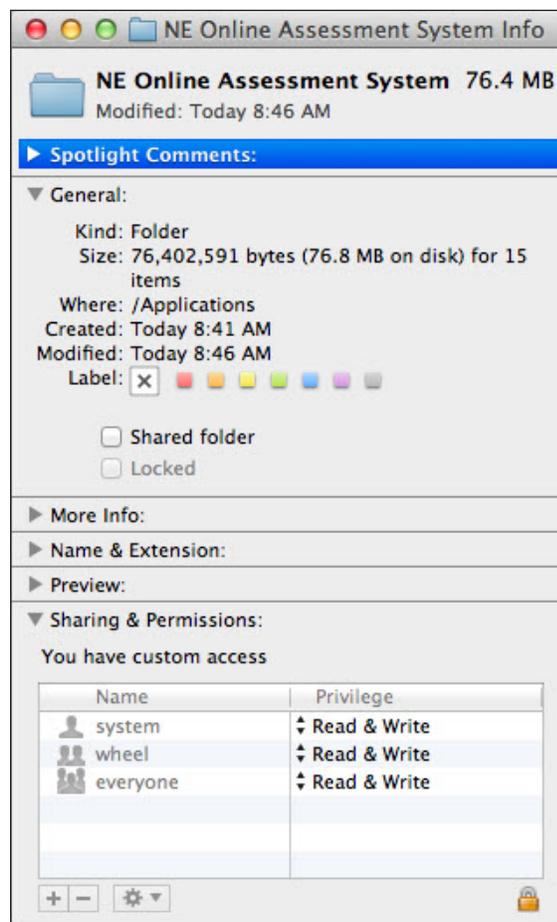
Installing INSIGHT Using a Software Deployment Tool

The following example shows how to install INSIGHT on a Mac using the Apple Remote Desktop™ software.

Note: The Apple Remote Desktop software was used for this example, but the process is similar with other software deployment tools.

1. Install and configure the INSIGHT secure browser on the computer from which you will be distributing the software (see “Quick Tour 4: Installing INSIGHT for Mac OS (OS X)” on page 52).

! Important: To ensure that testers can access the correct folders on the testing computers, you may need to adjust the permissions on the folders you will be copying before you distribute them to the testing computers (see the figure below).

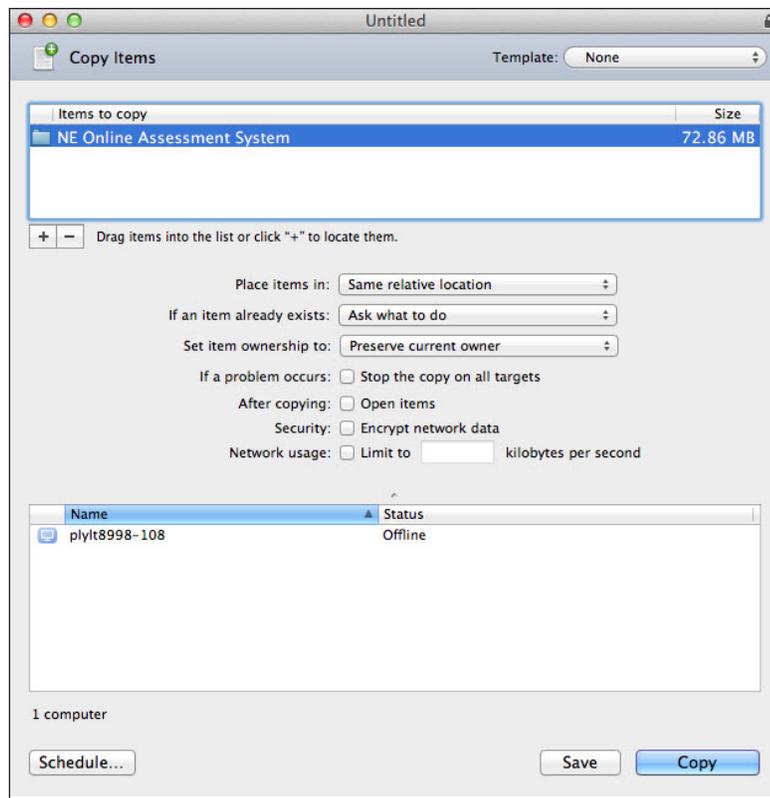


Installing INSIGHT Using a Software Deployment Tool (cont.)

2. Start Apple Remote Desktop and select the following directories in a Copy Items window from the Apple Remote Desktop administrator's computer.

/Applications/NE Online Assessments

Note: You may need to adjust the destination locations and permissions depending on student's permissions (see the figure below).



3. Copy the folders to your list of destination computers.
4. Verify the installation by running the Software Readiness Check on the computers where you installed the software. Select **NE Online Assessments–Readiness** from the Applications folder.

Starting INSIGHT

You can start INSIGHT from a testing computer by using the desktop shortcut created by the installer, or from the Applications folder by selecting **Applications–NE Online Assessments–DRCInsight**.

Stopping INSIGHT

If INSIGHT becomes unresponsive, the NeSA-Technology Assessment Coordinator (N-TAC) may need to stop it using the key combination, **Command–Q**.

Uninstalling INSIGHT

You can uninstall (remove) INSIGHT using the Applications folder. You also can run the uninstallation silently.

Using the Applications Folder

You can uninstall (remove) INSIGHT by selecting **Applications–NE Online Assessments–DRC Uninstaller**. Click **OK** when the dialog box displays and enter your Mac administrator login information and click **OK**. The uninstaller automatically uninstalls the program.

Notes:

Section Five: Linux Installation



■ What's Covered in This Section

This section describes the installation process in a Linux environment.

First, it provides basic information about installing and uninstalling the Testing Site Manager (TSM) and INSIGHT using the standard Linux interface.

Note: You should install the TSM *before* you install INSIGHT so that you can specify the path to the TSM and the communication port during the INSIGHT installation.

Then, the section provides more advanced technical information about:

- Managing a TSM: starting, stopping, changing the default communication port, and uninstalling.
- Managing INSIGHT: starting, stopping, and uninstalling.
- Working in the terminal using Linux operating system commands.

Note: In this section, we assume that as an experienced Linux user you are familiar with Linux concepts such as Terminal mode, the BootUp Manager software, and the Ubuntu Software Center.

■ Installing a TSM

Because of the role that the TSM plays in testing, there are some special considerations regarding TSM software installation.

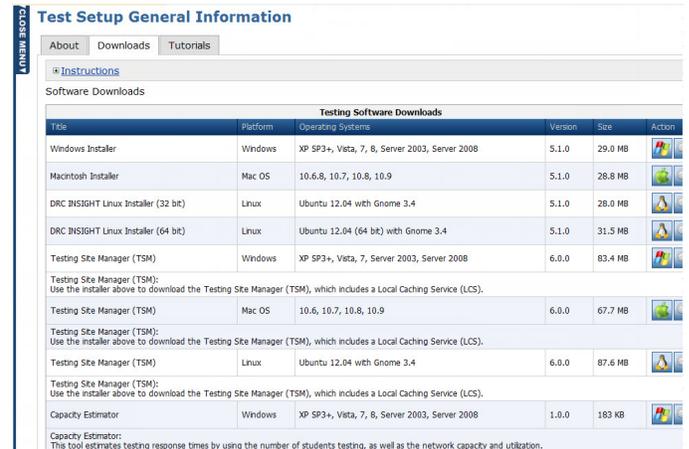
- The computer on which you install the TSM software should have a static IP address (an address that does not change when the computer is restarted or rebooted). If the IP address of a TSM machine changes, you must re-configure the testing computers that connect to that TSM.
- If you need to change the configuration of a TSM after it is installed, you must uninstall the TSM and install a new version. If you re-install a TSM, you may need to re-configure the testing computers that connect to it.

Quick Tour 5: Installing a TSM for Linux

This Quick Tour describes how to install the Testing Site Manager (TSM) for Linux. DRC provides an easy-to-use Wizard to install the TSM software. In a Linux environment, you must enter a few commands before you can run the Wizard.

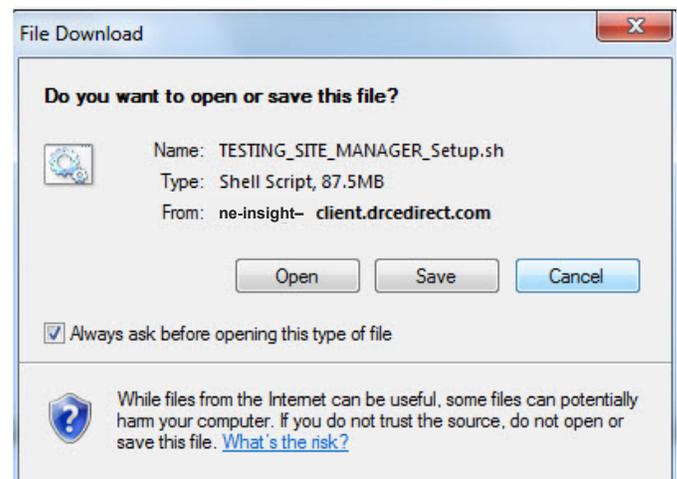
1. To launch the Wizard and start the installation, log on to eDIRECT and select **Test Setup–General Information–Downloads**.

Note: If you have another version of the TSM (or LCS) installed, uninstall it before you install a new version (see “Uninstalling the TSM” on page 72).

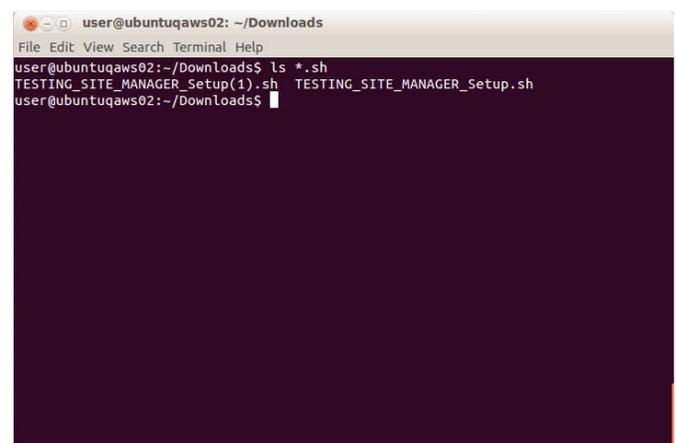


2. Click on the Testing Site Manager (TSM) installer icon for Linux () to download the TSM setup shell file—**TESTING_SITE_MANAGER_Setup.sh**—to the Downloads directory on your testing computer.

Note: Depending on the web browser you are using, a pop-up window may display. If it does, select **Save File** and click **OK**. Other browsers automatically download the installation file to your Downloads folder.



3. Start a terminal and navigate to your Downloads directory.
4. Use the **ls** command to verify that the TESTING_SITE_MANAGER_Setup.sh file is in the Downloads directory. If it is not there, download it again.



Quick Tour 5: Installing a TSM for Linux

5. Enter the following command (all Linux commands are case-sensitive) to start the installation:

```
sudo sh TESTING_SITE_MANAGER_Setup.sh
```

The sudo command gives you temporary administrator privileges and allows you to run the shell file.

If prompted, enter your administrator password at the prompt. Linux unpacks the shell file and launches the Wizard to start the installation. The installation program creates an application folder in the /opt or /usr/local directory.

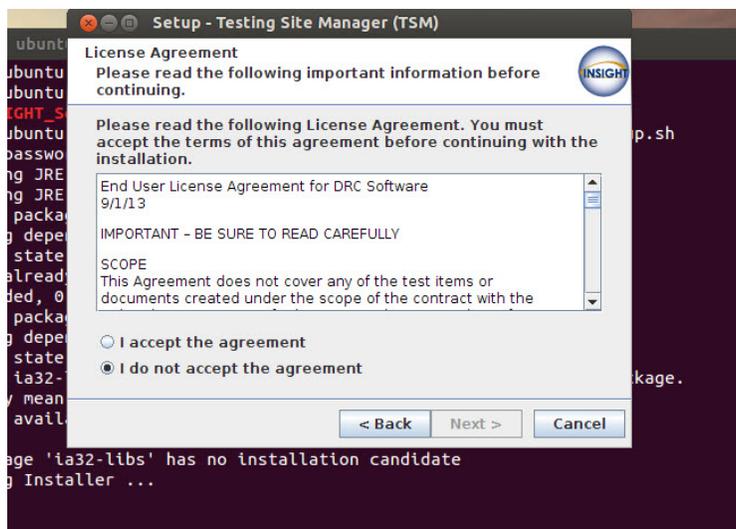
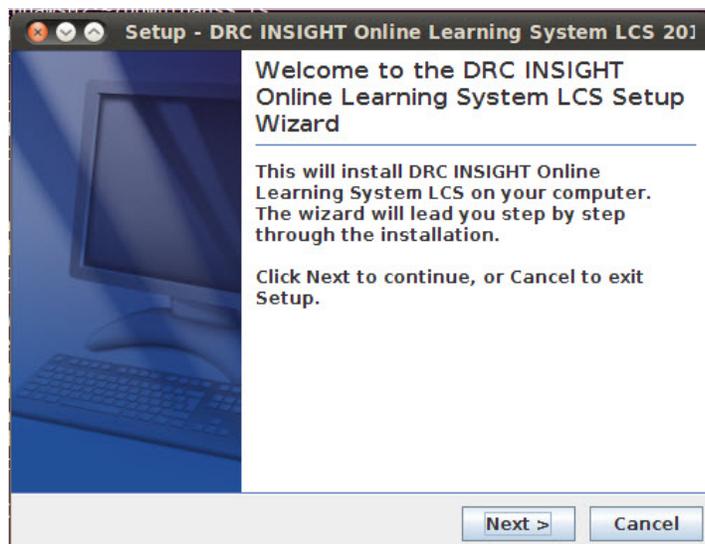
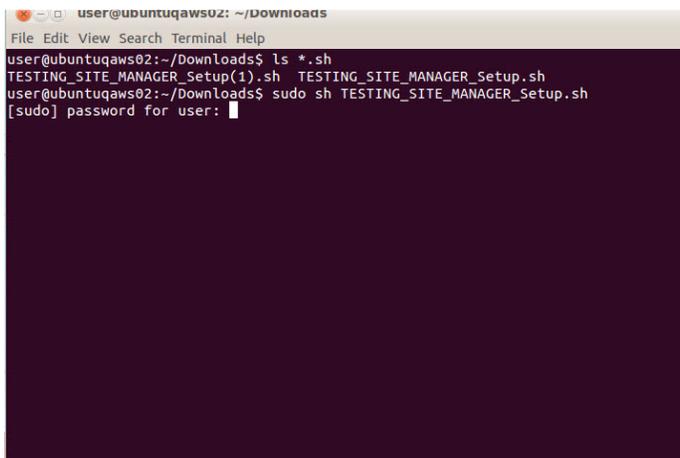
Note: On some 64-bit systems, you must install 32-bit Java libraries for the installation program to run. If you need to install these libraries, enter the command, **sudo apt-get install ia32-libs**

6. The Welcome screen displays for the DRC INSIGHT Testing Site Manager (TSM) Setup Wizard.

Click Next to continue.

7. The DRC INSIGHT License Agreement window displays. To continue the installation, read the agreement and select it by choosing the option **I accept the agreement**. (If you do not accept the agreement, the installation ends.)

When the Next button becomes active, click **Next** to continue.



Quick Tour 5: Installing a TSM for Linux

8. The Select Configuration Options window displays. On this window you specify whether to enable content caching (test content) and/or response caching (test responses). The default values are to enable both types of caching. After you have made your selections, click **Next** to continue.

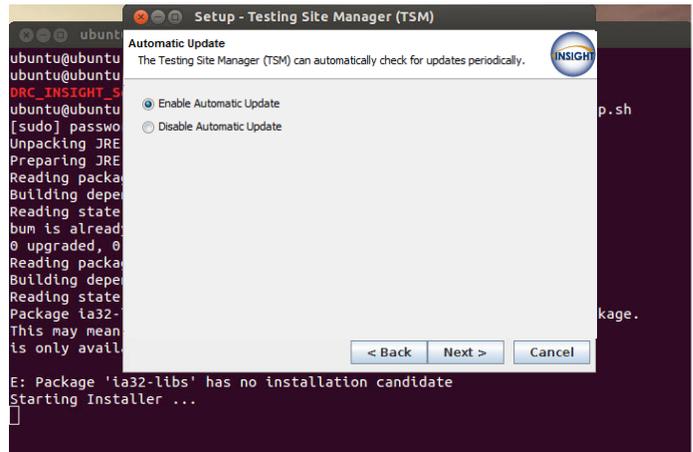
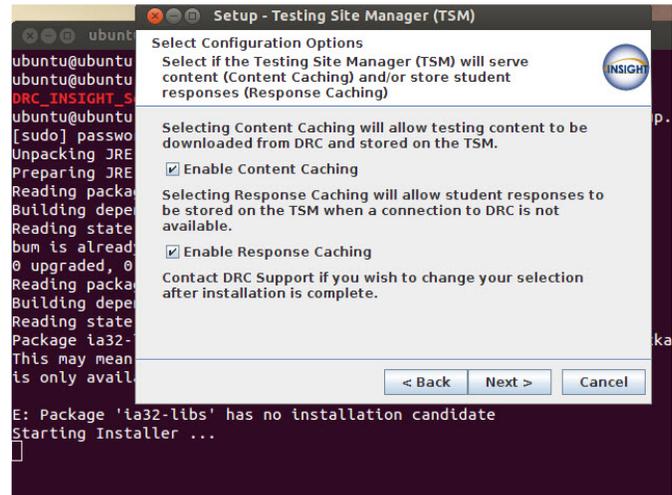
! **Important:** If you use content caching, install the TSM software on a computer that will be available when test content is automatically updated. Whenever you restart a computer that has the TSM software installed, or anytime you plan to use the TSM for testing, verify that the TSM content is up to date before you attempt to test (see “Content Caching” on page 88).

9. The Automatic Update window displays. On this window, specify whether to enable automatic TSM software updates.

- If you select **Enable Automatic Update** (the default value), DRC updates the TSM software automatically.
- If you select **Disable Automatic Update**, DRC notifies you whenever an update to the TSM software is available and you must update the software manually.

After you have made your selection, click **Next** to continue.

! **Important:** If you need to change the configuration of a TSM after it is installed, you must uninstall the TSM and install a new version. If you re-install a TSM after you have installed INSIGHT, you may need to re-configure the INSIGHT configuration properties for the testing computers that use the TSM (see “Setting DRC INSIGHT Properties” on page 129).



Quick Tour 5: Installing a TSM for Linux

10. During the installation, a window displays to indicate the progress of the installation. If necessary, you can click **Cancel** to end the installation process.

When the installation completes, the Setup Complete window displays.

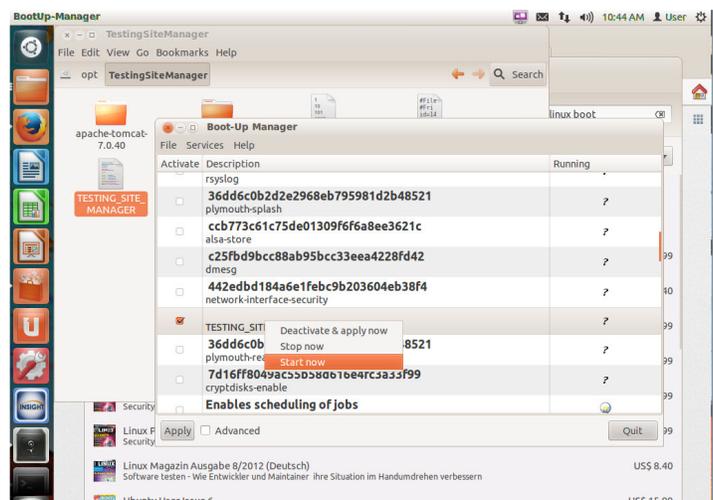
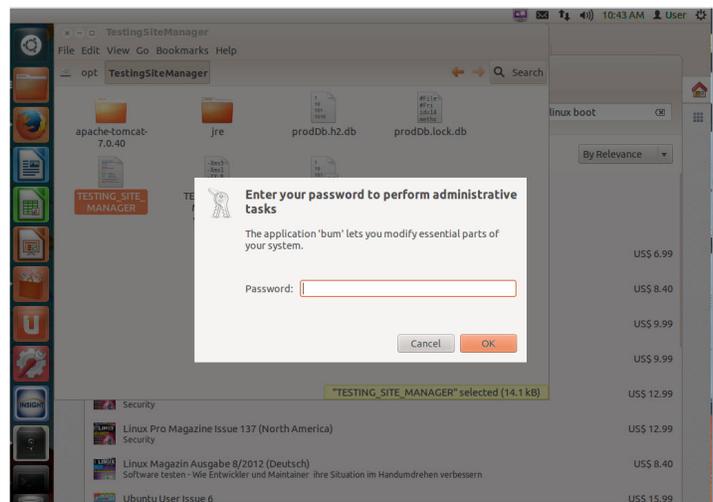
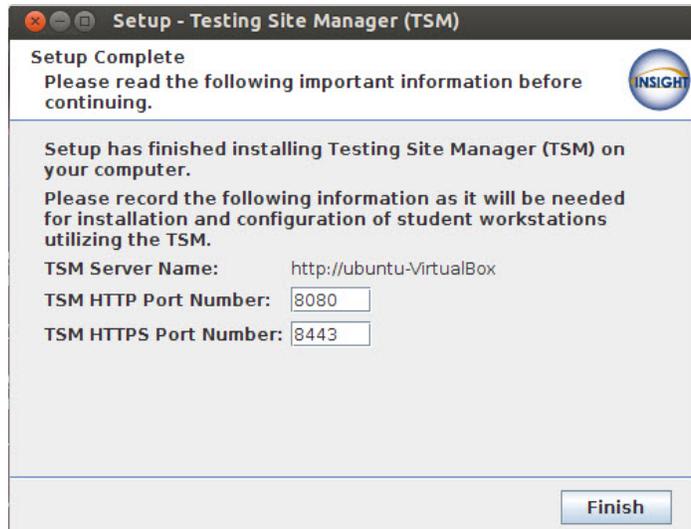
Record the TSM server name and port numbers. You need this information when you install INSIGHT.

- The TSM HTTP Port Number is the port number for regular communication.
- The TSM HTTPS Port Number is the port number for encrypted communication that the INSIGHT secure web browser uses.

! Important: To avoid potential conflicts, be certain no other device is using either port. You can change the port numbers from this window.

Click **Finish** when you are ready.

11. Open the Linux Bootup Manager. You may need to provide your administrator password.
12. Locate TESTING_SITE_MANAGER in the list, select it, right-click and select **Start Now**. When the Service started pop-up dialog displays, click **OK**.



Quick Tour 5: Installing a TSM for Linux

13. Start a browser and enter the following address into the address bar of a web browser:

http://servername:8080/

Where *servername* is the TSM server Name from Step 10. In our example, it is **ubuntu-VirtualBox**.

Note: When the TSM is first installed, the forms and items for all tests are downloaded automatically. The TSM will not display until these forms and items are downloaded, which could take a few minutes.

When the Enter Testing Site Manager Name window displays, enter a name in the TSM Name field that will help you remember the location of the TSM machine and click **OK**.

The name you choose is limited to 40 characters and there are no special formatting requirements (see “Using the TSM” on page 85).

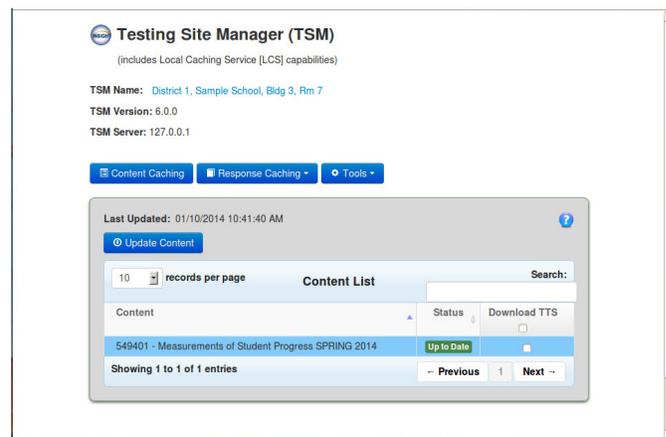
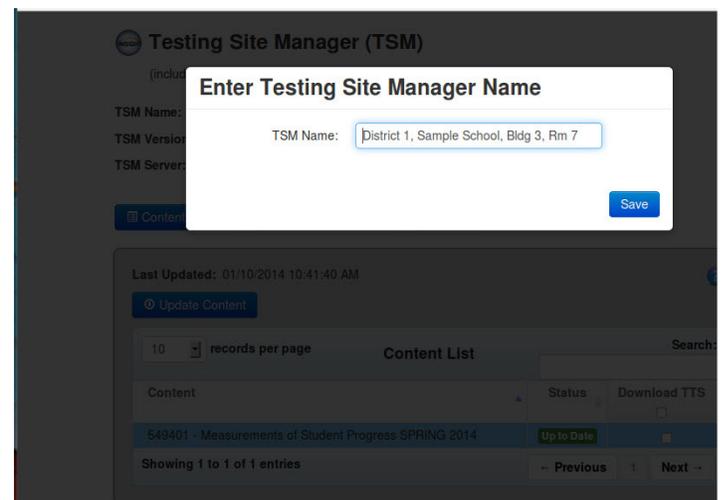
Note: DRC recommends that you include the district, school, and location (building and/or room number) of the TSM.

14. The TSM displays. If you specified Content Caching (Step 4), your test forms and items were downloaded with the TSM installation.

If you are using optional accommodations such as Text-to-Speech (TTS), select the media content you need (the status of the corresponding test changes to Out of Date).

Click **Update Content** to load the latest test versions (see “Content Caching” on page 88). When the TSM updates the content cache, the Status field changes from Out of Date to Up to Date.

You are ready to install INSIGHT.



Quick Tour 6: Installing INSIGHT for Linux

This Quick Tour describes how to install the DRC INSIGHT Online Learning System for Linux. DRC provides an easy-to-use Wizard to install the INSIGHT software. In a Linux environment, you use the Ubuntu Software Center to run the Wizard.

1. To launch the Wizard and start the installation, log on to eDIRECT, select **Test Setup–General Information–Downloads**, and click on the Linux Installer icon to download the INSIGHT setup file—**DRC_INSIGHT_Setup_i386.deb** (32-bit) or **DRC_INSIGHT_Setup_amd64.deb** (64-bit)—to the Downloads directory on your testing computer.

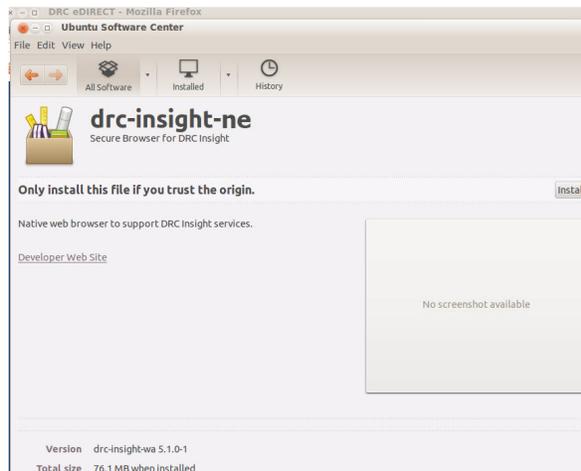
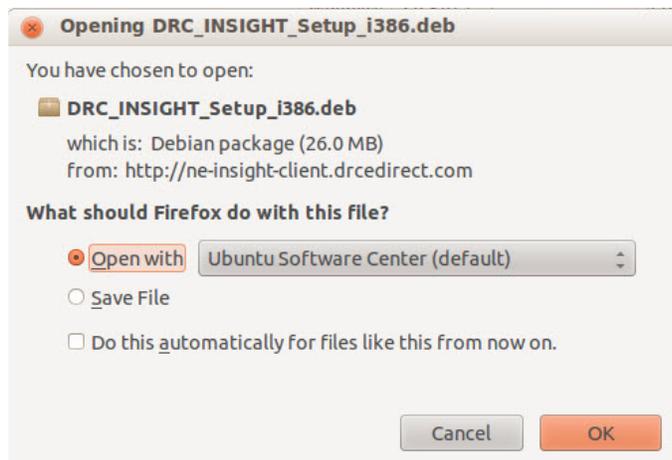
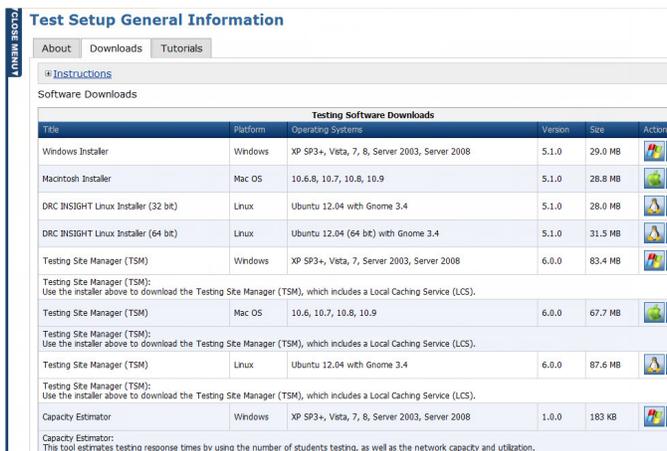
If the location used INSIGHT the previous year, you should uninstall the old version of the software first (see “Uninstalling INSIGHT Using the Synaptic Package Manager” on page 75).

2. The Opening DRC_INSIGHT_Setup_i386.deb dialog box displays (for 32-bit machines). The file for 64-bit machines is DRC_INSIGHT_Setup_amd64.deb.

Select **Open with Ubuntu Software Center (default)** if it is not selected and click **OK**.

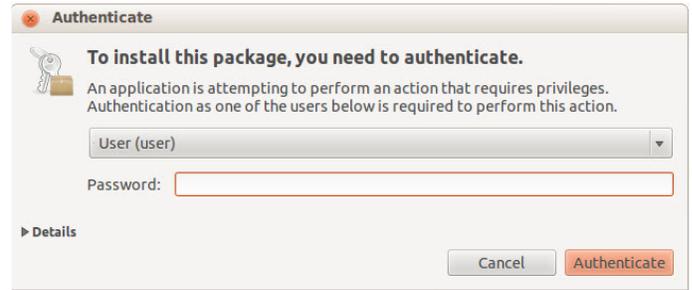
Note: Some browsers do not display a dialog box and load the installation file directly to your Downloads folder.

3. When the Ubuntu Software Center window displays, click **Install**.

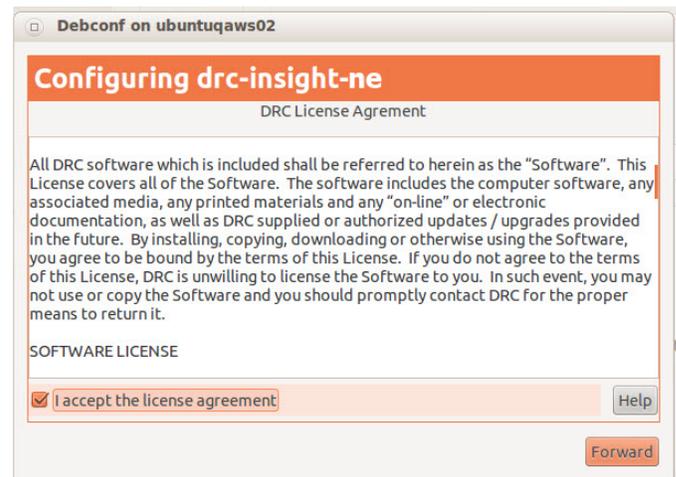


Quick Tour 6: Installing INSIGHT for Linux

- The Authenticate dialog box displays. Select your username from the drop-down menu, enter your password and click **Authenticate**.

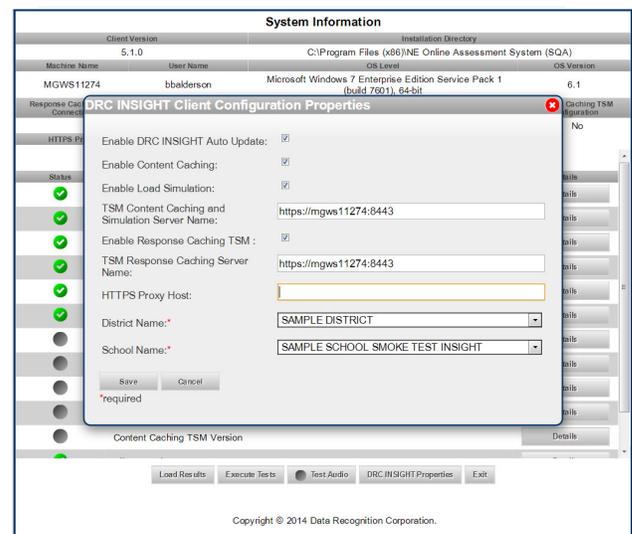


- The DRC License Agreement window displays. Check the **I accept the License agreement** checkbox and click **Forward**. The INSIGHT installation starts.
- When INSIGHT is successfully installed, the System Readiness Check displays. (You also can run the System Readiness Check by going to the Online Assessment System directory and clicking on **Readiness**.)



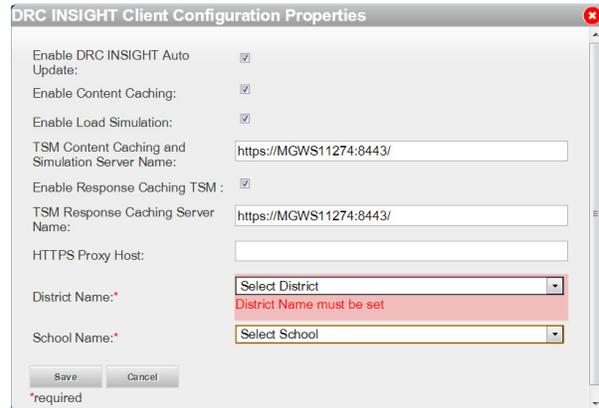
To connect to a TSM, click **DRC Properties** to display the **DRC INSIGHT Client Configuration** window (see “Setting DRC INSIGHT Properties” on page 129 for details), enter your changes, and click **Save**.

- If you specified Content Caching, check **Enable Content Caching** and enter the secure path to that TSM server.
- If you will be using Load Simulation, check **Enable Load Simulation** and enter the secure path to that TSM server.
- If you specified Response Caching, check **Enable Response Caching TSM** (see Step 10 of “Quick Tour 5: Installing a TSM for Linux” on page 63).



Quick Tour 6: Installing INSIGHT for Linux

7. Select your school district and school from the drop-down menus. This information is required and will be used for load simulation reports. Click **Save**.



8. Click **Execute Tests** to verify that the testing computer and any TSM(s) are configured correctly. Click the **Details** button next to any test that you need more information about (see “Resolving System Readiness Required Tests” on page 125).
9. The System Readiness Check runs and displays the results for the testing computer.

You can click **Details** to view the details of a test, or click **Execute Tests** to rerun the tests (see “What is the System Readiness Check?” on page 118)

When you are ready, click **Exit**.



Managing the TSM

This section describes how to start and stop the TSM from a command line and how to remove a TSM.

Starting and Stopping the TSM from the Terminal

After the TSM software is installed, the Linux Administrator must start the associated service. The Linux Administrator can start or stop the TSM services in Terminal mode by using the start and stop commands as shown in the following example:

```
sudo /opt/TestingSiteManager/TESTING_SITE_MANAGER start
```

```
sudo /opt/TestingSiteManager/TESTING_SITE_MANAGER stop
```

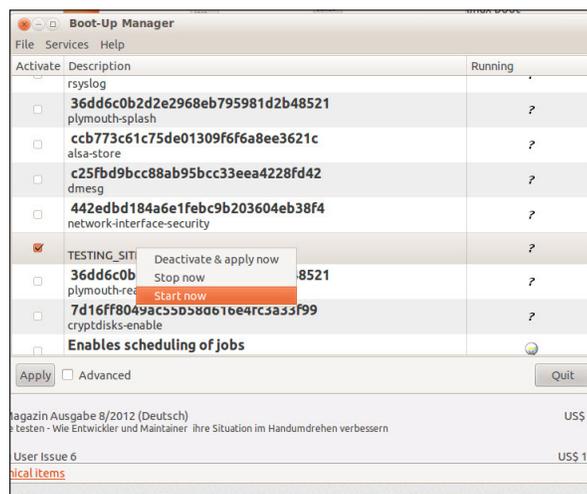
Starting and Stopping the TSM Using the BootUp Manager Software

A Linux Administrator also can use the BootUp Manager to stop or start a service, and define whether to launch a service automatically on startup.

Note: The BootUp Manager software is installed automatically with the TSM. You also can install it from the Ubuntu Software Center, or by using the `apt-get install bum` command.

To start the TSM service, stop the TSM service, or launch the TSM service automatically at startup, do the following:

1. Start the Bootup Manager.
2. Locate **TESTING_SITE_MANAGER**.
3. Check the **Activate** checkbox to launch the service automatically on startup. To start or stop the service, right-click and select **Start now** or **Stop now**.



Uninstalling the TSM

Before you attempt to uninstall the TSM, verify that there are no unsent responses in the TSM. If there are any unsent responses, you cannot uninstall the TSM.

To uninstall the TSM, perform the following steps:

1. Start Terminal mode.
2. Navigate to the TSM directory, `/opt/TestingSiteManager`.
3. Enter the command **`sudo sh uninstall`**
4. Click **Next** when the Uninstall Wizard displays (see Figure 5-1), follow the prompts, and click **Finish** when you are done.

Note: The uninstallation process may leave log or configuration files in the installation directory or the user home folder. You can ignore these files, or delete them using the **`rm`** command.

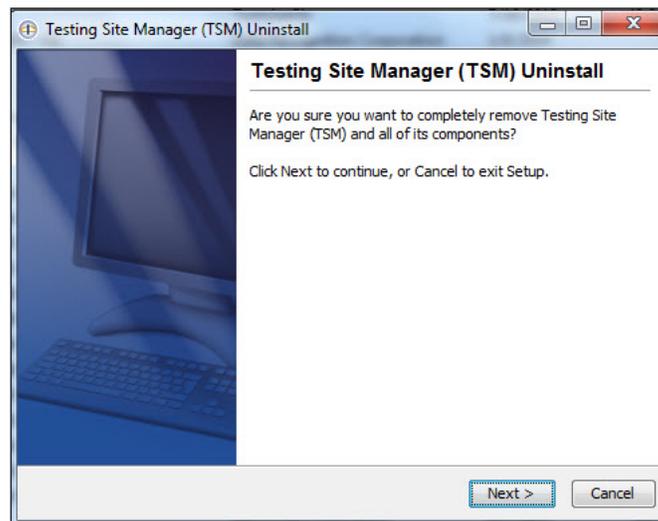


Figure 5-1: Uninstalling the TSM

Managing INSIGHT

This topic describes how to install INSIGHT from the terminal or command line, and how to uninstall INSIGHT using the Synaptic Package Manager or by command.

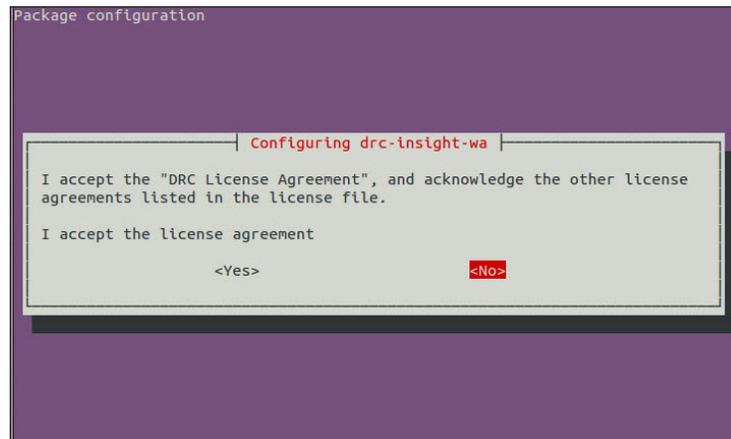
Installing INSIGHT Using the Terminal

To install INSIGHT in the Terminal, do the following:

1. Log on to eDIRECT, select **Test Setup—General Information—Downloads** and click on the Linux Installer icon to download the INSIGHT setup file—DRC_INSIGHT_Setup_i386.deb for 32-bit machines, or DRC_INSIGHT_Setup_amd64.deb for 64-bit machines—to your testing computer.

Note: Depending on the web browser you are using, a pop-up window may display. If it does, click **Save File**. Other browsers automatically download the installation file to your Downloads folder.

2. Open the Terminal and navigate to your Downloads directory.
3. Enter the command **sudo dpkg -i DRC_INSIGHT_Setup_i386.deb** or **DRC_INSIGHT_Setup_amd64.deb** and press **Enter**.
4. Tab to the **Yes** field under I accept the license agreement and press **Enter**.



Installing INSIGHT from a Command Line

The INSIGHT installation places a silent install shell script (silent_installer.sh) in the install directory. You can use this file to silently install INSIGHT in a Linux environment. Move the silent installer to the directory where the installer is located.

INSIGHT Installation Program Options

The following table shows the custom properties available for the installation program.

Property	Specifies	Description	Default Value
-l	LCSURL	The URL and secure port of the TSM server that caches test responses. Replace localhost with the name or IP address of the TSM server.	None
-p	HTTPs Proxy Host	The URL and secure port of the proxy host server.	None
-a	Auto update	Enables and disables the automatic update feature.	false
-d	District ID	Specifies the District ID for Load Simulation Testing. You must use the District ID code that DRC has listed for your site in the locations file.	None
-s	School ID	Specifies the School ID for Load Simulation Testing. You must use the School ID code that DRC has listed for your site in the locations file.	None
-c	Content Cache URL	The URL and secure port of the TSM server that caches test content and performs load simulation tests. Replace localhost with the name or IP address of the TSM server.	None
-u	Enables Content Caching	Enables and disables a TSM for content caching. If this is true, include the CONTENTCACHE property to specify the TSM that will perform content caching.	false
-i	Enables Content Cache for Load Simulation	Specified that load simulation testing is enabled for the testing computer. If this is true, include the CONTENT CACHE URL property to specify the TSM that will perform load simulation tests. You also must specify the District ID and School ID.	false

Installation Command Syntax and Example

The following is the syntax for the install program command:

```
silent_installer.sh <properties>
```

The following is an example of the command you would run using the terminal from the folder where both the install file and the silent_installer.sh file are located. The example installs the software in silent mode, specifies the TSM location for each type of caching—response and content, enables load simulation testing, specifies a school district ID, a school ID, enables automatic software updates, and specifies a proxy host.

```
sudo sh silent_installer.sh -l "https://responsetsm:8443" -p "https://proxyserver:34543" -a true  
-c "https://contenttsm:8443" -u true -i true -d 88888 -s 8883
```

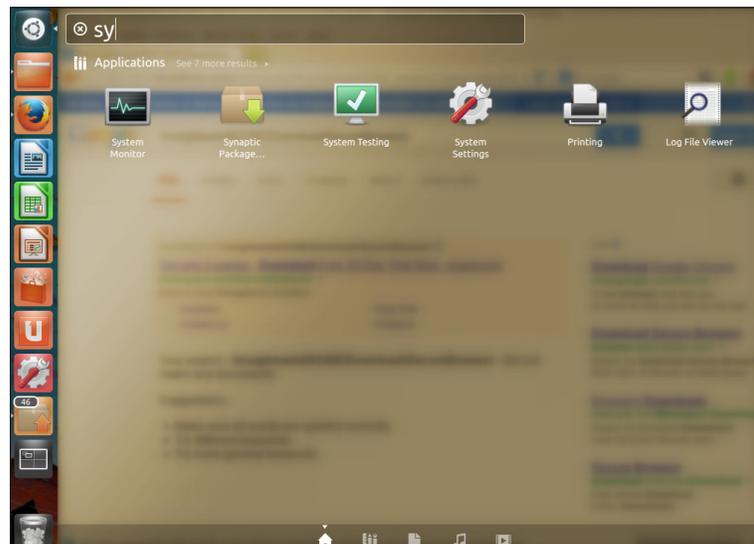
Uninstalling INSIGHT Using the Synaptic Package Manager

The Synaptic Package Manager is a graphical Linux tool to help you uninstall and remove software packages.

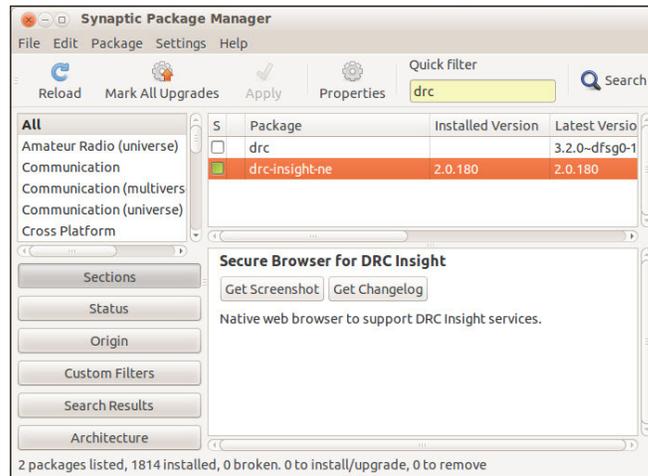
Note: You can install the Synaptic Package Manager by using the Ubuntu Software Center.

To uninstall INSIGHT, perform the following steps:

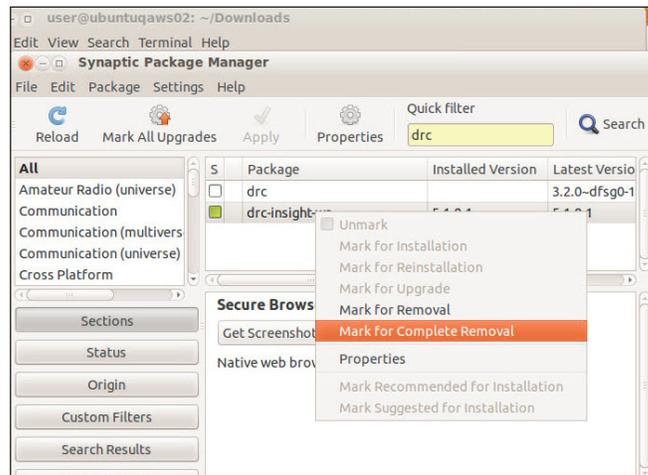
1. Start the Synaptic Package Manager by clicking on the **Synaptic Package Manager** icon in Applications.



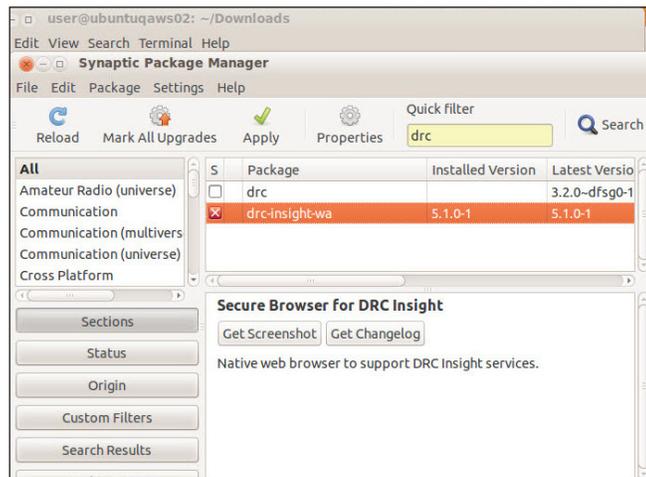
- From the Synaptic Package Manager, search for the string **drc** in the Quick Filter window.



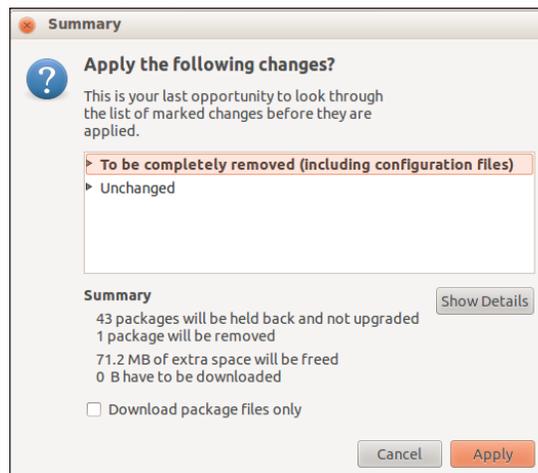
- Select **drc-insight-ne** and right-click on it. In the drop-down menu that displays, select **Mark for Complete Removal**.



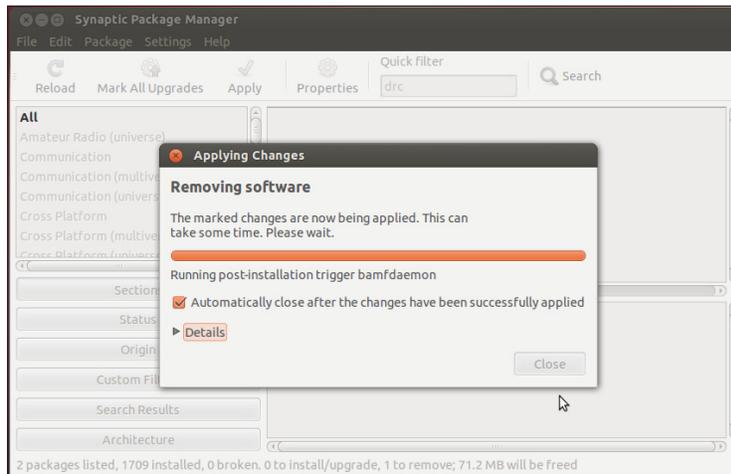
4. A red icon with a white x inside of it displays next to drc-insight-ne. On the Synaptic Package Manager toolbar, click **Apply**.



5. The **Apply the following changes?** dialog box displays. Select **To be completely removed (including configuration files)** and click **Apply**.



6. The Synaptic Package Manager removes the INSIGHT software package (drc-insight-ne).



Note: After you are finished uninstalling INSIGHT, if you see any files or folders remaining that you want to remove, you can remove them using the **rm** command (see Cleanup below). If you have any questions, please contact DRC Technical Support.

Uninstalling INSIGHT Manually

In a Linux environment, the command line tool for adding, removing, and updating software packages is apt-get. To remove INSIGHT, you can use the following command in terminal mode:

```
sudo apt-get remove drc-insight-ne
```

Cleanup

The Linux apt-get uninstall may leave files behind, such as the drconfiguration.json file. If this file still exists when you attempt a new installation, the settings for the new installation will not take effect. Use the following command to fully uninstall INSIGHT and remove its files.

```
sudo rm -rf /opt/NE\Online\Assessment\System/
```

Section :

Working with INSIGHT



■ What's Covered in This Section

■ Online Tools Training (OTT)

■ The Monitor Verification Test

■ The Testing Site Manager (TSM)

■ System Readiness Check

■ DRC INSIGHT Properties

This section discusses some of the tools and components of the DRC INSIGHT Online Learning System. These include Online Tools Training, the Monitor Verification Test, the Testing Site Manager, the System Readiness Check, and DRC INSIGHT Properties. This section also offers tips and techniques to implement your INSIGHT configuration for maximum efficiency.

This topic describes 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.

This set of topics describes how to use the TSM software to manage tests and response communication between DRC and students efficiently. It also describes how to use the diagnostic tools available within the TSM.

- **Using Caching, Content Caching, Response Caching**

These three topics describe how to use the TSM to help manage the process of storing and updating tests (content caching), and transmitting student test responses (response caching).

- **Forecasting Ping Activity**

This topic describes how to display the consistency and rate of data transfer across a network (latency) during a specified date range to determine the best times for testing.

- **Load Simulation Test (LST)**

This topic describes how to perform load simulations and estimate the amount of time it will take to download tests and upload responses during testing based on the testing load.

This topic describes how to verify that a testing computer is ready to test using the INSIGHT software.

This topic describes how to specify important system properties for testing computers, as well as how to connect to a TSM to perform content caching, response caching, and load simulation tests.

Online Tools Training (OTT)

The 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.

The 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.

School Test Coordinators (STCs) and Test Administrators (TAs) should review the OTT before the students begin the test administration. All students who will be testing online should have at least one opportunity to review the OTT for their subject and/or grade.

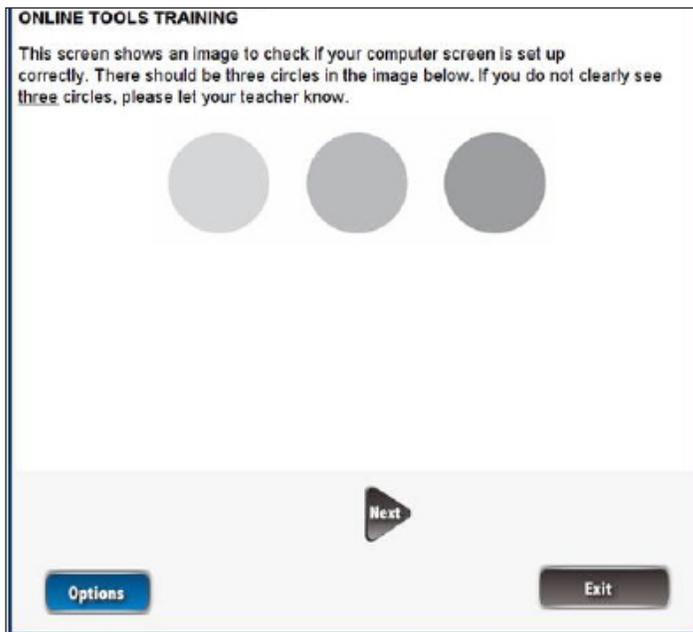
To try the OTT, do the following:

- 1a.** From a Windows 7 computer, select **All Programs–NE Online Assessments–NE Online Assessments** (or click the **NE Online Assessments** desktop shortcut).
- 1b.** From a Mac (OS X), select **Applications–NE Online Assessments–NE Online Assessments** (or click the **NE Online Assessments** desktop shortcut).
- 2.** When INSIGHT launches, click **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 the OTT—students are allowed to repeat the practice tests 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.

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 for “changing the contrast for operating system *x* or monitor *y*”.

Windows Operating System

- On a laptop, 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)

- To change the brightness, use the keyboard buttons, or select Apple button–**System Preferences**–**Displays** (Mac 10.6) or **System Preferences**–**Accessibility**–**Monitor** (Mac 10.8) 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.

Linux

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

■ The Testing Site Manager (TSM)

The Testing Site Manager (TSM) is a powerful, easy-to-configure, web-based software application that contains a number of software tools to help you plan, configure, manage, and troubleshoot your online testing environment, including caching software to store tests and/or student test responses.

The following table describes the suite of TSM software tools.

Tool	Description
Content Caching	The TSM stores tests and lets you update them to the most current versions for testing.
Response Caching	<p>In the event the Internet connection to DRC is lost, the TSM stores test responses and attempts to transmit them at fifteen-minute intervals to DRC.</p> <p>It also lets you review details about responses currently stored in the TSM (unsent responses) and responses the TSM transmitted to DRC (historical responses).</p>
Load Simulation Test (LST)	The LST helps you estimate variations in network responsiveness based on the number of students testing at the same time, the current network traffic, the amount of available bandwidth, and other site-specific factors.
Ping Trend Graphs	Ping trend graphs help you determine the best time of day to test based on the variances in speed, connectivity, and responsiveness of your network communication.

Using the TSM

This topic describes how to use the TSM and its basic functions.

To start the TSM, select **Start–All Programs–TestingSiteManager–TestingSiteManager**.

The first time you start the TSM, the Enter Testing Site Manager Name dialog box displays. In the TSM Name field, enter a name that will help you remember the location of the TSM machine and click **Save**.

Note: DRC recommends that you include the district, school, and location (building and/or room number) of the TSM. The name you choose is limited to 40 characters and there are no special formatting requirements.

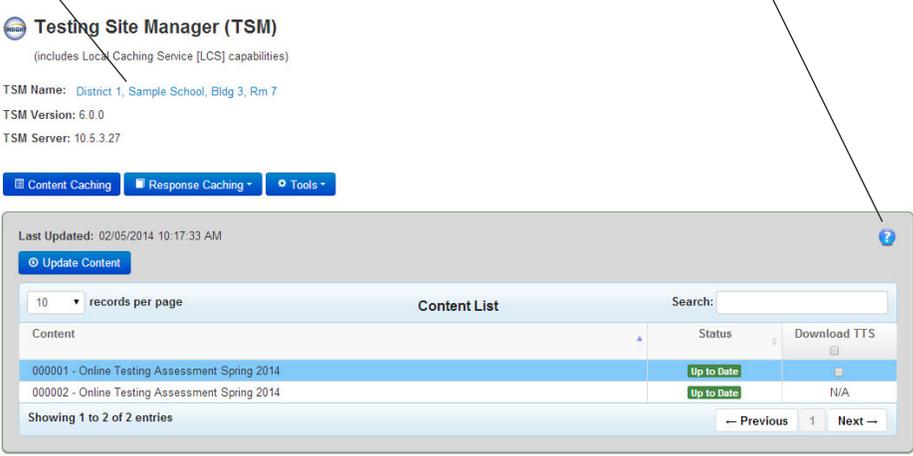
Enter Testing Site Manager Name

TSM Name:

Save

You can click on the name of the TSM to edit it (this is the name you entered when you started the TSM for the first time).

The **Help** icon () is displayed on every page in the TSM. Click it to display online help for the page you are currently on.



Testing Site Manager (TSM)
(includes Local Caching Service [LCS] capabilities)

TSM Name: [District 1, Sample School, Bldg 3, Rm 7](#)
TSM Version: 6.0.0
TSM Server: 10.5.3.27

[Content Caching](#) | [Response Caching](#) | [Tools](#)

Last Updated: 02/05/2014 10:17:33 AM

[Update Content](#)

10 records per page

Content	Status	Download TTS
000001 - Online Testing Assessment Spring 2014	Up to Date	
000002 - Online Testing Assessment Spring 2014	Up to Date	N/A

Showing 1 to 2 of 2 entries

[Previous](#) | 1 | [Next](#)

[Content Caching](#) | [Response Caching](#) | [Tools](#)

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There are active page links to all of the functions currently configured in the TSM.

Using the TSM (cont.)

You can sort the data in a column.

- Click the up arrow icon (▲) next to the column header to sort the column data in ascending order, either alphabetically or by date, depending on the type of data.
- Click the down arrow icon (▼) next to the column header to sort the data in descending order, either alphabetically or by date, depending on the type of data.

Throughout the TSM you can use the Search field to search for specific information, such as tests, student responses, and simulation results, and filter the display.

The screenshot displays the Testing Site Manager (TSM) interface. At the top, it shows the TSM Name: District 1, Sample School, Bldg 3, Rm 7, TSM Version: 6.0.0, and TSM Server: 10.5.3.27. Below this are buttons for Content Caching, Response Caching, and Tools. The main content area is titled 'Content List' and includes a search field, a 'records per page' drop-down menu (set to 10), and an 'Update Content' button. The table below has columns for Content, Status, and Download TTS. Two rows of data are visible, both with 'Up to Date' status. Navigation buttons for 'Previous' and 'Next' are at the bottom of the table, with the number '1' indicating the current page. A footer contains copyright information for Data Recognition Corporation.

Use the **records per page** drop-down menu to specify the number of records to display at once. You can select **10** (the default value), **25**, **50**, **100**, or **All** (for all records).

Use the **Previous** and **Next** buttons to move backward and forward between pages in the display. The number between the buttons indicates the number of the page you are currently viewing.

■ Using Caching

The TSM can cache (store) test forms and student test results. It manages test forms using the Content Caching option; test responses using the Response Caching option. Both of these caching options are configurable—you can use either, both, or neither.

- Before testing occurs, content caching stores copies of the tests that you can keep updated, manually or automatically, to guarantee that students are using the correct version of the test.

ⓘ Important: With content caching, each morning before testing begins, verify that your TSM has the most current test forms (see “Content Caching” on page 88).

- As students test, if a student’s connection to DRC fails, response caching stores their test responses in the TSM as a secure backup copy to be transmitted to DRC.

Testing continues even if the connection to DRC is disrupted. If this happens, the TSM attempts to transmit its stored responses every fifteen minutes. You also can use the TSM to review the status of stored responses and transmit them manually.

Note: In earlier versions of INSIGHT, the Local Caching Service (LCS) performed the TSM caching functions.

Content Caching

The content (test forms) stored in the TSM may be out of date by the time you start the TSM after installation. To test, you must replace any tests that are out of date with the most current versions from DRC—students can only use a test that is up to date.

The **Content Caching** button displays the tests available on the TSM. These tests are available to download to INSIGHT.

Each testing administration in the cache is identified by a unique ID number followed by the name of the specific assessment. In the examples in this User Guide, a generic identifier is displayed—the identifier you see will be specific to your state and assessments.

Testing Site Manager (TSM)
(includes Local Caching Service [LCS] capabilities)

TSM Name: District 1, Sample School, Bldg 3, Rm 7
TSM Version: 6.0.0
TSM Server: 10.5.3.27

Content Caching | Response Caching | Tools

Last Updated: 02/05/2014 10:17:33 AM

Update Content

10 records per page

Content	Status	Download TTS
000001 - Online Testing Assessment Spring 2014	Up to Date	
000002 - Online Testing Assessment Spring 2014	Up to Date	N/A

Showing 1 to 2 of 2 entries

Content Caching | Response Caching | Tools
Copyright © 2014 Data Recognition Corporation

The **Status** column in the Content List table indicates whether all test forms in an administration are the most current version (up to date).

- If all of the most current versions of tests in an administration are on the TSM, the Status column displays **Up to Date** in green text.
- If the most current versions are not on the TSM, the Status column displays **Out of Date** in red text.

Note: An administration must have a status of Up to Date before it is administered. Otherwise, students receive an error message when they log in and will be unable to test.

Content Caching (cont.)

If you have specified accommodations such as Text-To-Speech (TTS), the forms for those tests are not loaded automatically when the TSM is downloaded.

Select the appropriate checkbox to download the customized test forms.

Download TTS

Note: A value of **N/A** in a column indicates that there is no accommodation for the corresponding assessment.

The screenshot shows the Testing Site Manager (TSM) interface. At the top, it displays the TSM Name: District 1, Sample School, Bldg 3, Rm 7, TSM Version: 6.0.0, and TSM Server: 10.5.3.27. Below this, there are tabs for Content Caching, Response Caching, and Tools. The main content area shows a table with the following data:

Content	Status	Download TTS
000001 - Online Testing Assessment Spring 2014	Out of Date	<input checked="" type="checkbox"/>
000002 - Online Testing Assessment Spring 2014	Up to Date	N/A

The interface also includes a search bar, a dropdown for records per page (set to 10), and a 'Showing 1 to 2 of 2 entries' indicator. A 'Update Content' button is visible above the table. The footer of the page reads 'Content Caching | Response Caching | Tools' and 'Copyright © 2014 Data Recognition Corporation.'

The Status indicator changes to Out of Date to indicate that you do not have the forms for the accommodation.

Click **Update Content** to update the TSM with the latest customized test version(s).

Note: This process can take some time based on the size of these forms. When the process is complete, the Status indicator changes to **Up to Date** to indicate that you have the latest forms for the accommodation.

Content Caching (cont.)

To update tests manually, click the **Update Content** button at the top of the page. When you click **Update Content**, the latest version of each test is downloaded and the status changes to Up to Date.

Note: The TSM also automatically checks for updates at a regular intervals. If the computer where the TSM is installed is powered on, the TSM automatically updates the test content.

! Important: On the day of testing, confirm that the TSM test content is up to date to ensure that students can log into their tests. For example, if the machine where the TSM is installed was turned off recently, it is possible that its content is out of date. If it is, click **Update Content**.

Click **Update Content** to update the TSM with the latest test version(s).

Testing Site Manager (TSM)
(includes Local Caching Service [LCS] capabilities)

TSM Name: District 1, Sample School, Bldg 3, Rm 7
TSM Version: 6.0.0
TSM Server: 10.5.3.27

Content Caching | Response Caching | Tools

Last Updated: 02/03/2014 02:47:33 PM

Update Content

10 records per page

Content	Status	Download TTS
000001 - Online Testing Assessment Spring 2014	Out of Date	<input checked="" type="checkbox"/>
000002 - Online Testing Assessment Spring 2014	Up to Date	N/A

Showing 1 to 2 of 2 entries

Content Caching | Response Caching | Tools
Copyright © 2014 Data Recognition Corporation.

When an update starts, the **Content Update** page displays information regarding the update process. After you read the information, click **OK**.

Content Update

The TSM is downloading content. This process may take some time to complete. Please do not refresh the browser or close it. Do not power off the computer or restart it.

OK

Content Caching | Response Caching | Tools

Last Updated: 07/29/2014 02:06:13 PM

Updating...

Processing 88290 TTS files for administration: 550479

During the update, a progress bar displays to indicate the status of the update.

Viewing Unsent Student Test Responses

To check whether student test responses have been transmitted to DRC and for detailed information about those responses, Select **Response Caching–Unsent Responses**.

Note: If the Internet connection with DRC is lost while testing, student responses are saved to the TSM. When the TSM is communicating with DRC, these stored responses are transmitted automatically every fifteen minutes.

The screenshot displays the Testing Site Manager (TSM) interface. At the top, it shows the TSM Name: District 1, Sample School, Bldg 3, Rm 7, TSM Version: 6.0.0, and TSM Server: 10.5.3.27. Below this, there are three main navigation buttons: 'Content Caching', 'Response Caching', and 'Tools'. The 'Response Caching' button is selected, and a dropdown menu is open, showing 'Unsent Responses' and 'Historical Responses'. The 'Unsent Responses' option is highlighted. Below the dropdown, there is a 'Last Updated: 02/05' timestamp and an 'Update Content' button. A table titled 'Content List' is displayed, showing two entries. The first entry is '000001 - Online Testing Assessment Spring 2014' with a status of 'Up to Date' and a 'Download TTS' button. The second entry is '000002 - Online Testing Assessment Spring 2014' with a status of 'Up to Date' and a 'Download TTS' button. The table also shows 'Showing 1 to 2 of 2 entries' and navigation buttons for 'Previous', '1', and 'Next'.

Content	Status	Download TTS
000001 - Online Testing Assessment Spring 2014	Up to Date	[Download TTS]
000002 - Online Testing Assessment Spring 2014	Up to Date	N/A

Select **Response Caching–Unsent Responses** to see information about student responses currently stored on the TSM for transmission to DRC.

Viewing Unsent Student Test Responses (cont.)

When you select **Unsent Responses**, the Student Responses–Unsent tab displays information about student responses currently stored in the TSM that are waiting to be transmitted to DRC.

You can send saved student responses manually by clicking the **Transmit Responses** button.

Testing Site Manager (TSM)
(includes Local Caching Service [LCS] capabilities)

TSM Name: District 1, Sample School, Bldg 3, Rm 7
TSM Version: 6.0.0
TSM Server: 10.5.3.27

Content Caching | Response Caching | Tools

Unsent Tests: 4
Last Transmission Attempt: 01/14/2014 12:53:59 PM
Next Transmission Attempt: 01/14/2014 01:08:59 PM

Transmit Responses

10 records per page

School	Test Session	Student Name	State ID	Earliest Response
Demo Site 1	Grade 05	Demo One Student	231365498	01/14/2014 12:39:57 PM
Demo Site 1	Grade 05	Demo Two Student	231365499	01/14/2014 12:39:57 PM
Demo Site 2	Grade 06	Demo Three Student	231365400	01/14/2014 12:39:57 PM
Demo Site 2	Grade 06	Demo Four Student	231365401	01/14/2014 12:39:57 PM

Showing 1 to 4 of 4 entries

Content Caching | Response Caching | Tools

Next Transmission Attempt indicates the date and time the next automatic transmission is scheduled.

Last Transmission Attempt indicates the date and time of the last attempt to transmit student responses.

Viewing Unsent Test Responses (cont.)

Unsent Tests indicates the number of tests that have not been sent to DRC.

! Important: Verify that this number is 0 (zero) at the end of each testing day and at the end of the entire testing period. If it is not zero, click the **Transmit Responses** button to transmit any stored responses.

Enter information in the **Search** field to search for specific data.

The screenshot shows the Testing Site Manager (TSM) interface. At the top, it displays 'Testing Site Manager (TSM)' with a sub-note '(includes Local Caching Service [LCS] capabilities)'. Below this, it shows 'TSM Name: District 1, Sample School, Bldg 7, Rm 7', 'TSM Version: 6.0.0', and 'TSM Server: 10.5.3.27'. There are three buttons: 'Content Caching', 'Response Caching', and 'Tools'. A box highlights 'Unsent Tests: 4'. Below this, it shows 'Last Transmission Attempt: 01/14/2014 12:53:59 PM' and 'Next Transmission Attempt: 01/14/2014 01:08:59 PM', with a 'Transmit Responses' button. A table titled 'Student Responses - Unsent' is displayed with columns: School, Test Session, Student Name, State ID, and Earliest Response. The table contains four rows of demo data. Below the table, it says 'Showing 1 to 4 of 4 entries' and has 'Previous' and 'Next' buttons with the number '1' between them. A search field is located to the right of the table title.

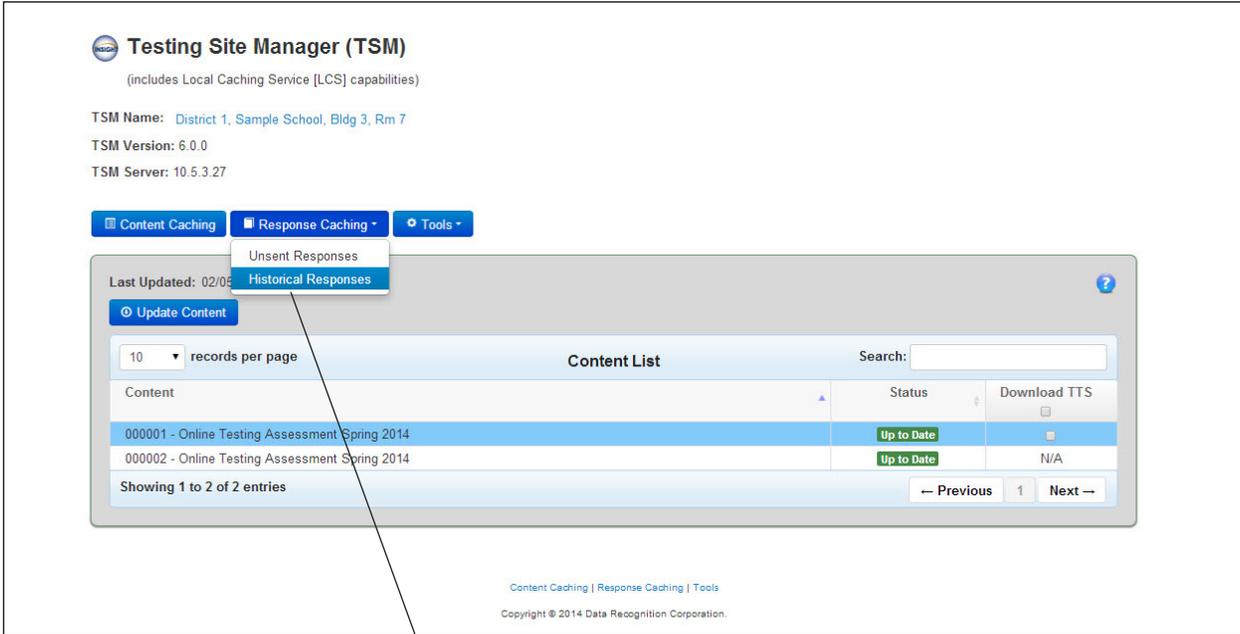
School	Test Session	Student Name	State ID	Earliest Response
Demo Site 1	Grade 05	Demo One Student	231365498	01/14/2014 12:39:57 PM
Demo Site 1	Grade 05	Demo Two Student	231365499	01/14/2014 12:39:57 PM
Demo Site 2	Grade 06	Demo Three Student	231365400	01/14/2014 12:39:57 PM
Demo Site 2	Grade 06	Demo Four Student	231365401	01/14/2014 12:39:57 PM

By default, the Student Responses – Unsent page displays all of the information currently available.

Use the **Previous** and **Next** buttons to move backward and forward between pages in the display. The number between the buttons indicates the page you are currently viewing.

Viewing Historical Test Responses

Select **Historical Responses** from the drop-down menu to display information about student responses that have been transmitted to DRC.



The screenshot displays the Testing Site Manager (TSM) interface. At the top, it shows the TSM Name as 'District 1, Sample School, Bldg 3, Rm 7', TSM Version as 6.0.0, and TSM Server as 10.5.3.27. Below this, there are three main menu items: 'Content Caching', 'Response Caching', and 'Tools'. The 'Response Caching' menu is expanded, showing two options: 'Unsent Responses' and 'Historical Responses'. The 'Historical Responses' option is selected, and a line points from this selection to a text box at the bottom of the page. The main content area shows a 'Content List' table with two entries, both with a status of 'Up to Date'. The first entry is '000001 - Online Testing Assessment Spring 2014' and the second is '000002 - Online Testing Assessment Spring 2014'. The table also includes columns for 'Content', 'Status', and 'Download TTS'. The interface includes a search bar, a 'records per page' dropdown set to 10, and navigation buttons for 'Previous', '1', and 'Next'.

Content	Status	Download TTS
000001 - Online Testing Assessment Spring 2014	Up to Date	
000002 - Online Testing Assessment Spring 2014	Up to Date	N/A

Select **Response Caching–Historical Responses** to display information about the student test responses that the TSM has sent to DRC.

Viewing Historical Test Responses (cont.)

Enter information in the **Search** field to search for specific data.

Testing Site Manager (TSM)
(includes Local Caching Service [LCS] capabilities)

TSM Name: [District 1, Sample School, Bldg 7, Rm 3](#)
TSM Version: 6.0.0
TSM Server: 10.5.3.27

[Content Caching](#) [Response Caching](#) [Tools](#)

Unsent Tests: 4
Last Transmission Attempt: 01/27/2014 12:18:50 PM
Next Transmission Attempt: 01/27/2014 12:33:50 PM
[Transmit Responses](#)

10 records per page **Student Responses - Historical** Search:

School	Test Session	Student Name	State ID	Transmitted Timestamp
Demo Site 3	Grade 04	Demo Five Student	231365402	01/27/2014 12:28:46 PM
Demo Site 4	Grade 05	Demo Six Student	231365403	01/27/2014 12:28:46 PM

Showing 1 to 2 of 2 entries

[← Previous](#) [Next →](#)

[Content Caching](#) | [Response Caching](#) | [Tools](#)
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By default, the **Student Responses – Historical** tab displays all of the information currently available.

Use the **Previous** and **Next** buttons to move backward and forward between pages in the display. The number between the buttons indicates the page you are currently viewing.

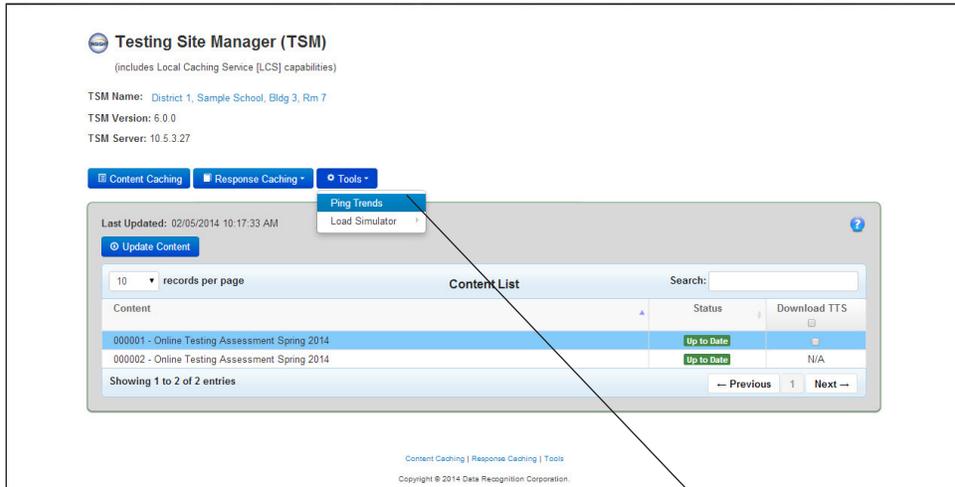
■ Graphing Ping Activity

When the TSM “pings” the IP address of the DRC server, the network sends data packets from the TSM to the DRC server and back. The network also calculates the time, in milliseconds, it takes for the data to be received. The longer this time is, the longer it has taken the DRC server to receive the data packets (usually because of excess network traffic).

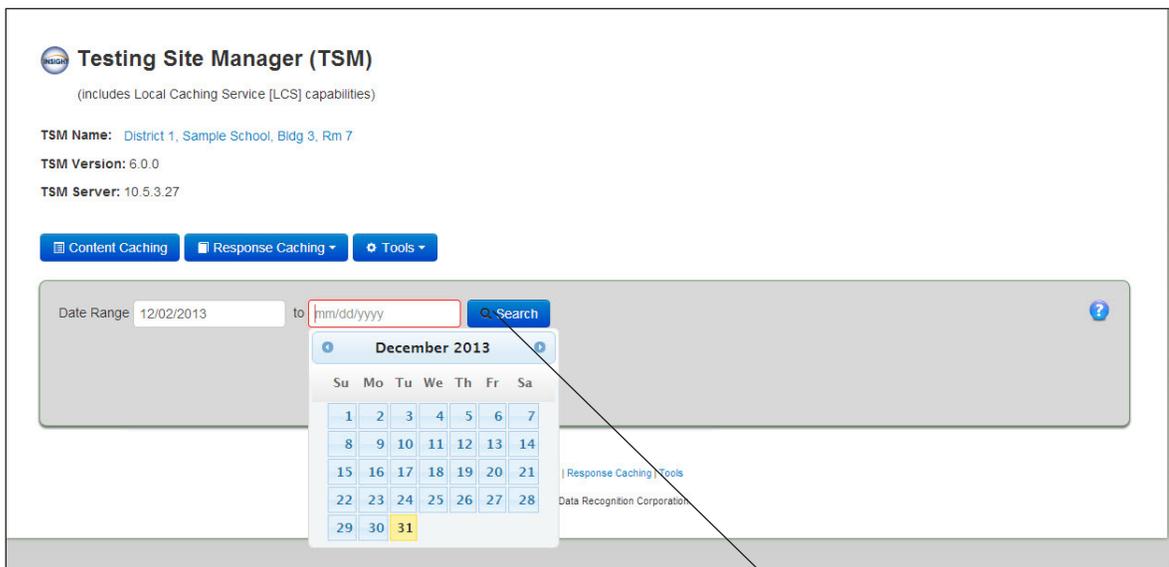
This rate of data transfer across a network is referred to as latency. Knowing the latency is useful for helping to determine peak network traffic times and for analyzing the best times for testing.

Graphing Ping Activity

Select **Tools–Ping Trends** to graph the time that was required by the TSM to ping the DRC servers for a date range that you specify, as well as the number of ping failures during the same date range.

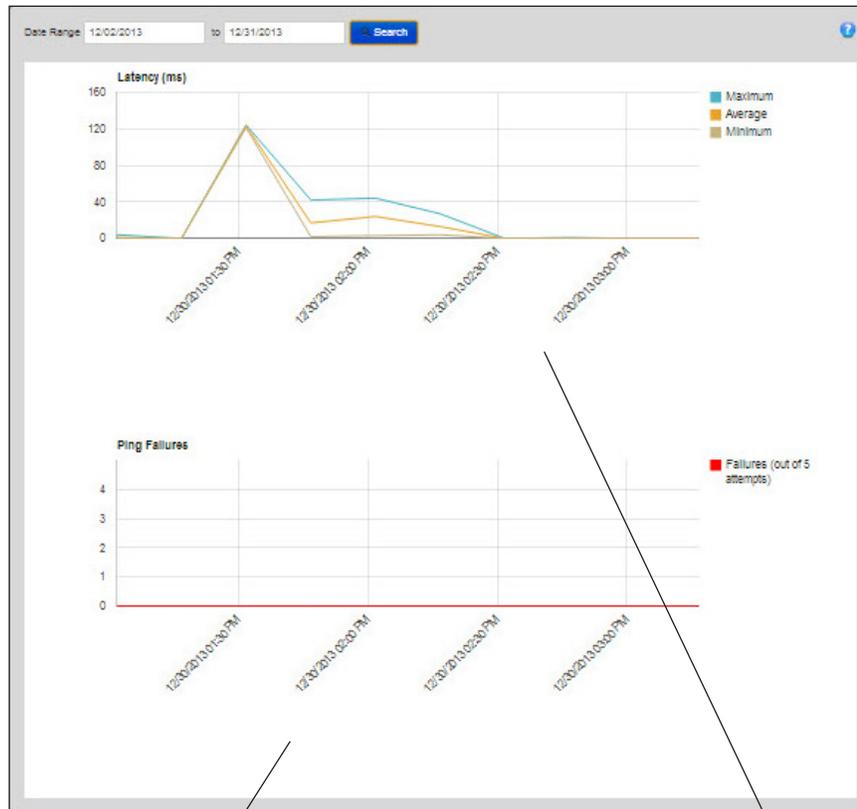


1. Select Tools–Ping Trends to display the Ping Trends page.



2. Use the drop-down calendars to specify a date range for the data and click Search.

Graphing Ping Activity (cont.)

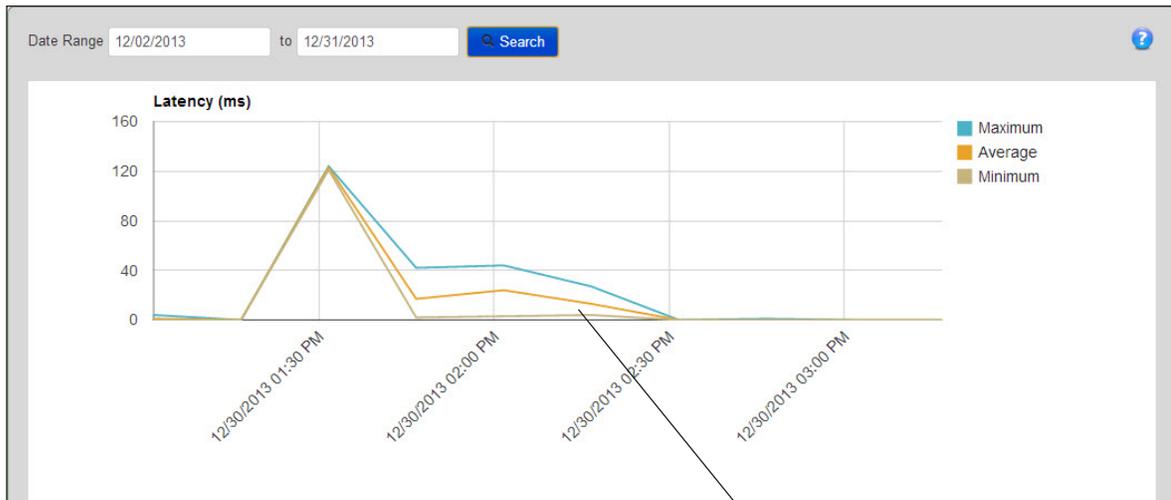


Two graphs display network communication information for the date range.

- The first graph reveals the latency of the network.
- The second graph indicates the number of ping failures.

Graphing Ping Activity (cont.)

The first graph displays a measure of the latency during the date range. Latency is a measure of the time delay in a system—the greater the latency, the slower the communication.



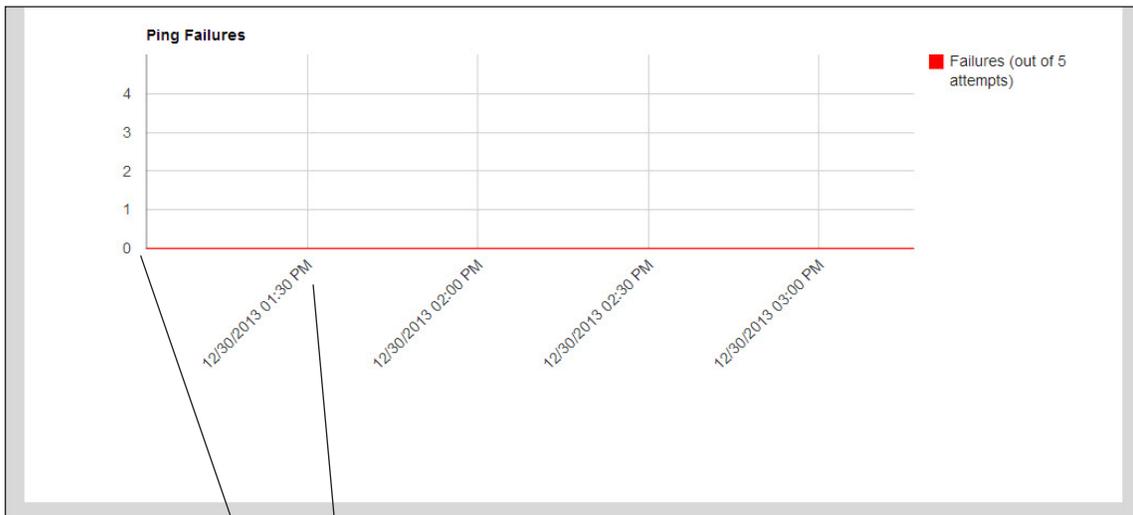
In this graph, latency represents the time required (in milliseconds) for ping attempts during the time period, organized by color:

- The blue line indicates the maximum amount of time needed for ping attempts.
- The orange line indicates the average amount of time needed for ping attempts.
- The tan line indicates the minimum amount of time needed for ping attempts.

As the time required for ping attempts increases, peaks or spikes appear that can indicate increased network traffic and slower response time. You can use this information to determine optimum testing times.

Graphing Ping Activity (cont.)

The second graph displays the number of ping failures during the date range. Ping failures are a good indicator of system availability—a spike, or high failure rate, indicates a time period of poor communication between the TSM and DRC. Similarly, a low failure rate indicates a good time for testing. You can use this information to determine optimum testing times.



Ping failures indicate the number of times (Y-axis) that the TSM was unable to successfully ping the DRC server after five attempts during each time interval* (X-axis).

*To graph ping failures, the TSM divides the date range you specified into equal date and time intervals.

■ Load Simulation Testing

NeSA-Technology Assessment Coordinators (N-TACs) can perform load simulations to estimate the amount of time it will take during testing to download tests and upload responses. The following are the prerequisites to performing a load simulation test:

- The TSM must be installed, running, and connected to each testing computer that you plan to include in the simulation.
- INSIGHT must be installed on each testing computer that you plan to include in the simulation.
- The System Readiness Check must be active on each testing computer that you plan to include in the simulation.
- You must select a district and school name for the testing computer for your load simulation reports.

Note: For general questions and answers regarding Load Simulation Testing, see “Load Simulation Testing Questions” on page 153).

Performing a Load Simulation

You use the TSM and INSIGHT to perform a load simulation—if you are not using the TSM, you cannot perform load simulations. First, you install INSIGHT on a testing computer and specify the location of the TSM the testing computer is using to register the testing computer with the TSM. Next, you start the TSM, specify which of the registered computers to include in the simulation, and run your simulations. Then, you use the TSM to review the results of the simulations.

DRC INSIGHT Client Configuration Properties

Enable DRC INSIGHT Auto Update:

Enable Content Caching:

Enable Load Simulation:

TSM Content Caching and Simulation Server Name:

Enable Response Caching TSM :

TSM Response Caching Server Name:

HTTPS Proxy Host:

District Name:*

School Name:*

Save Cancel

*required

To perform a load simulation, do the following:

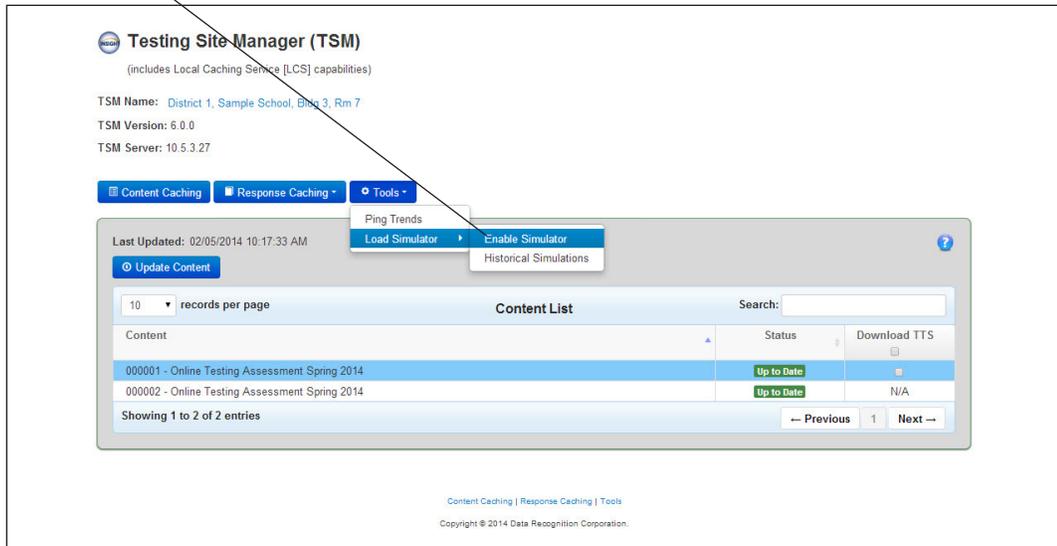
1. Install INSIGHT on each testing computer (see the Installation sections) that you will be using in the load simulation.
2. Start the System Readiness Check and click **DRC INSIGHT Properties** to display the DRC INSIGHT Client Configuration Properties window.
3. If you have not done so, check the **Enable Content Caching** and **Enable Load Simulation** checkboxes and specify the location of the TSM you use for content caching in the **TSM Content Caching and Simulation Server Name** field, select the district and school for the testing computer from the **District Name** and **School Name** drop-down menus, and click **Save** (see “Setting DRC INSIGHT Properties” on page 129).

 **Important:** When you are finished, leave the System Readiness Check open. The System Readiness Check must be active on each testing computer that you plan to include in the simulation.

4. Start the TSM by selecting **Start–All Programs–TestingSiteManager–TestingSiteManager**.

Performing a Load Simulation (cont.)

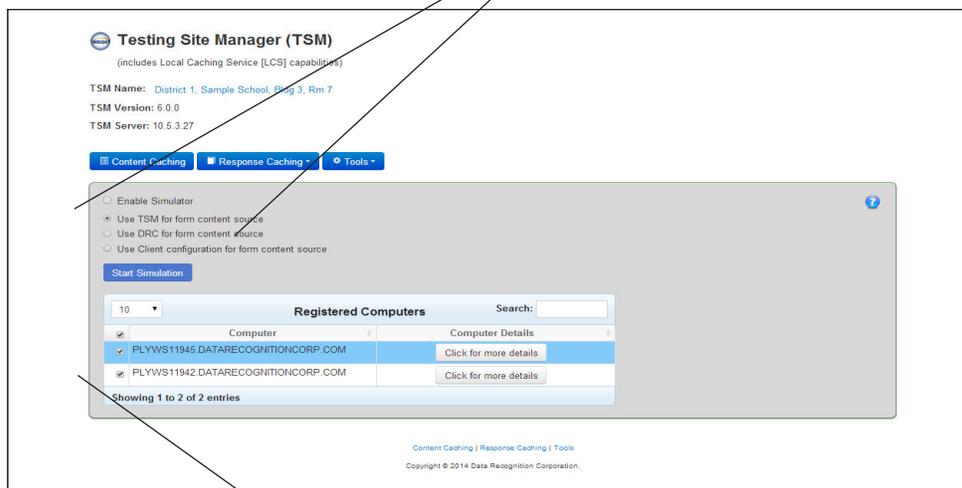
5. From the TSM, select **Tools–Load Simulator–Enable Simulator**.



You can specify the source for the test form content—the TSM, the DRC servers, or the testing computer.

6. Check the **Enable Simulator** checkbox and use the radio buttons to specify the source of the form content for the simulation.

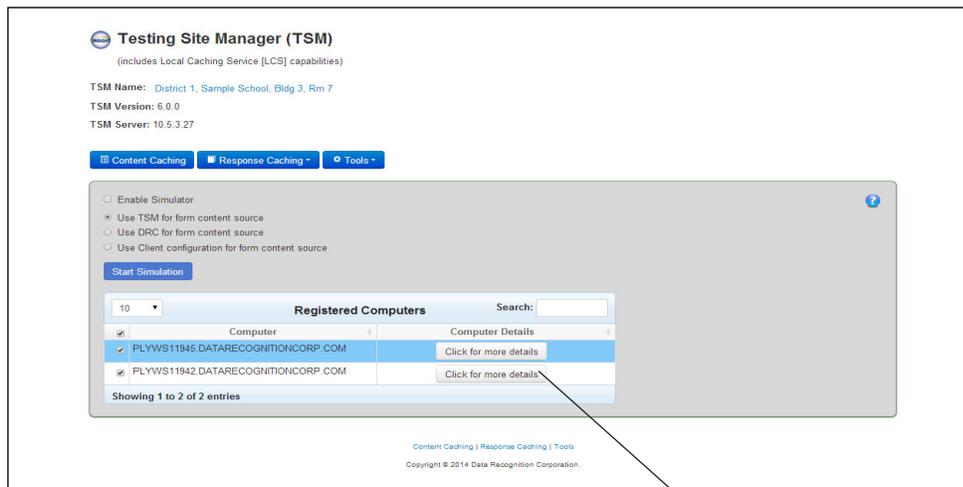
Note: This step registers the testing computer with the TSM.



The Registered Computers page displays the number and name of each testing computer registered to the TSM.

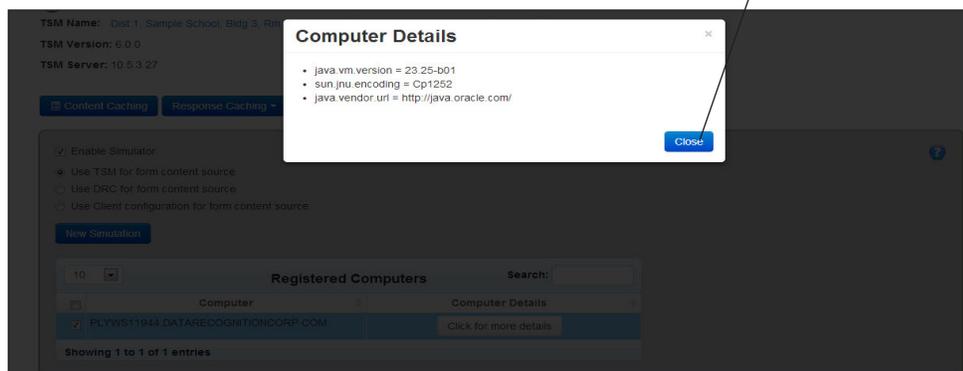
7. Select one or more computers from the Computer column to include in the simulation by clicking the checkbox next to each computer's name. Click the checkbox at the top of the column to test all of the computers.

Performing a Load Simulation (cont.)

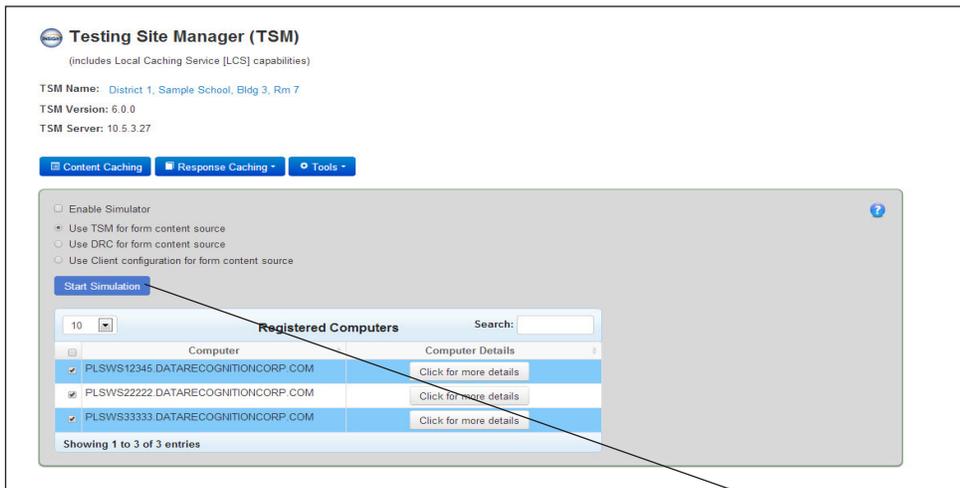


You are ready to run a simulation.

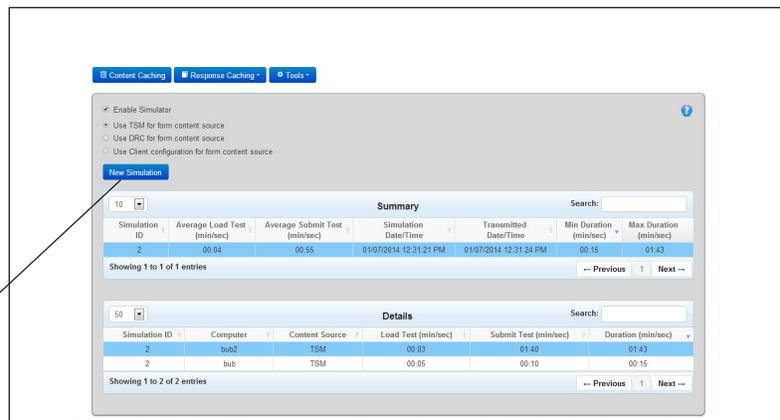
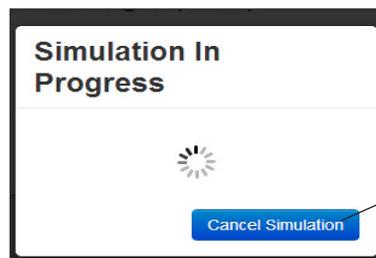
8. To locate one or more computers in the list, use the Search box. Click the **Click for more details** button to display technical details about the testing computer. Click **Close** when you are finished.



Performing a Load Simulation (cont.)



9. Click **Start Simulation** to start the simulation. You can click **Cancel Simulation** to cancel a simulation.



After a simulation, the Start Simulation button changes to New Simulation and each testing computer in the simulation displays a completion message.

10. To run another simulation, click the **New Simulation** button to reset it to **Start Simulation** and repeat Steps 4–9. If you are finished, close the System Readiness Check on each testing computer.

Note: A simulation times out after ten minutes. The time for a simulation that lasts less than one second is rounded to one second.

Analyzing Load Simulation Results

When the load simulation finishes, the results display. For a description of the information displayed, refer to the tables on the following page.

The simulation results are sorted by Maximum Duration and Simulation ID. You can click on any column heading to re-sort the data.

The screenshot shows a web interface for load simulation results. At the top, there are buttons for 'Content Caching', 'Response Caching', and 'Tools'. Below these are radio buttons for 'Enable Simulator' and three options for content source: 'Use TSM for form content source', 'Use DRC for form content source', and 'Use Client configuration for form content source'. A 'New Simulation' button is also present.

The 'Summary' table displays the following data:

Simulation ID	Average Load Test (min/sec)	Average Submit Test (min/sec)	Simulation Date/Time	Transmitted Date/Time	Min Duration (min/sec)	Max Duration (min/sec)
2	00:04	00:55	01/07/2014 12:31:21 PM	01/07/2014 12:31:24 PM	00:15	01:43

The 'Details' table displays the following data:

Simulation ID	Computer	Content Source	Load Test (min/sec)	Submit Test (min/sec)	Duration (min/sec)
2	bub2	TSM	00:03	01:40	01:43
2	bub	TSM	00:05	00:10	00:15

Analyzing Load Simulation Results (cont.)

The following tables describe the information displayed from the completed simulation.

Summary

The information in the Summary column summarizes simulation results across all of the testing computers in the simulation.

Heading	Description
Simulation ID	A system identifier for the simulation.
Average Load Test (min/sec)	The average time for the computers in the simulation to load test content.
Average Submit Test (min/sec)	The average amount of time for the computers in the simulation to submit test responses to DRC.
Simulation Date/Time	The date and time the simulation started.
Transmitted Date/Time	The time the simulation results were transmitted to DRC.
Min Duration (min/sec)	The time required for the fastest computer in the simulation to load the test and submit the results.
Max Duration (min/sec)	The time required for the slowest computer in the simulation to load the test and submit the results.

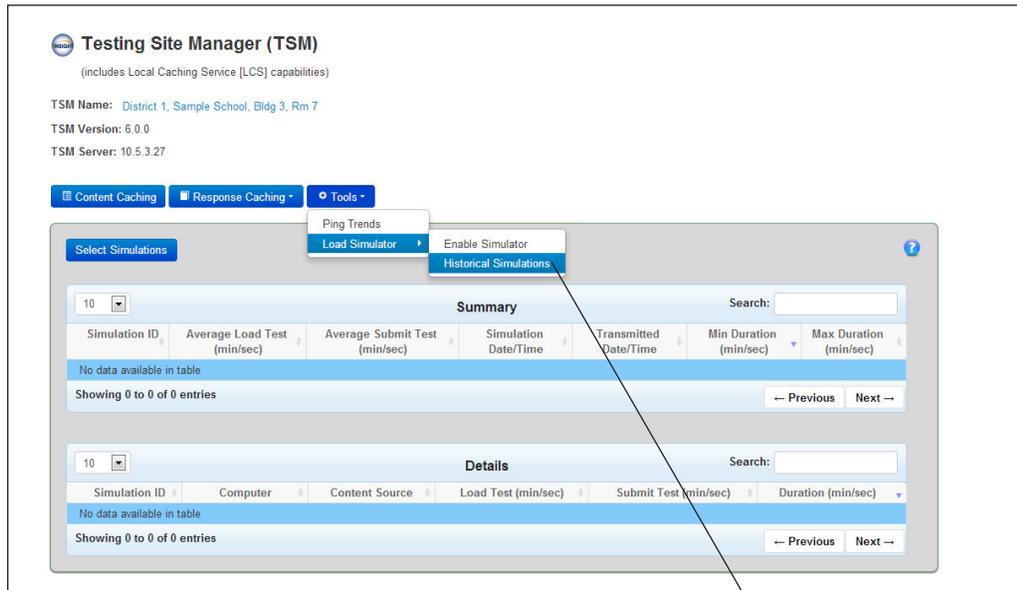
Details

The information in the Details column shows simulation details for each testing computer in the simulation.

Heading	Description
Simulation ID	A system identifier for the simulation.
Computer	The unique name of each computer in the simulation.
Content Source	The source of the test content loaded to the testing computer, DRC or TSM.
Load Test (min/sec)	The time it took the testing computer to load test content.
Submit Test (min/sec)	The time it took the testing computer to submit test responses to DRC.
Duration (min/sec)	The total time it took the testing computer to load the test and submit the results.

Viewing Historical Simulation Data

Use the Historical Simulations option to view the results of one or more simulations that you select. For a description of the meaning of the information displayed, refer to the tables that follow.

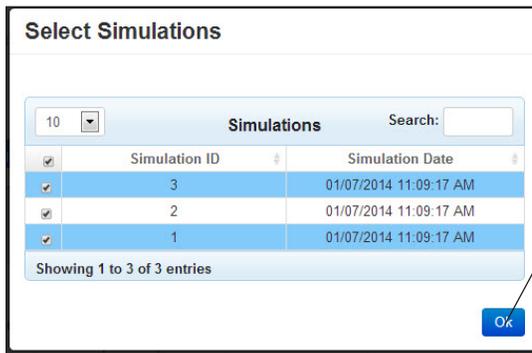


To select one or more simulations, do the following:

1. Select **Tools–Load Simulator–Historical Simulations**.
2. Click **Select Simulations**.

The Select Simulations dialog displays. Check a checkbox for each simulation you want to display.

3. Click **OK** to view the results.



Viewing Historical Simulation Data (cont.)

Testing Site Manager (TSM)
(includes Local Caching Service [LCS] capabilities)

TSM Name: [District 1, Sample School, Bldg 3, Rm 7](#)
 TSM Version: 6.0.0
 TSM Server: 10.5.3.27

Content Caching | Response Caching | Tools

Select Simulations

10 | Summary | Search:

Simulation ID	Average Load Test (min/sec)	Average Submit Test (min/sec)	Simulation Date/Time	Transmitted Date/Time	Min Duration (min/sec)	Max Duration (min/sec)
2	00:08	00:06	01/07/2014 11:09:17 AM		00:13	00:14
3	00:06	00:06	01/07/2014 11:09:17 AM		00:09	00:18
1	00:04	00:06	01/07/2014 11:09:17 AM		00:08	00:10

Showing 1 to 3 of 3 entries | -- Previous | 1 | Next --

10 | Details | Search:

Simulation ID	Computer	Content Source	Load Test (min/sec)	Submit Test (min/sec)	Duration (min/sec)
3	PLSWS22222.DATARECOGNITIONCORP.COM	DRC	00:13	00:05	00:18
2	PLSWS33333.DATARECOGNITIONCORP.COM	DRC	00:08	00:06	00:14
2	PLSWS11111.DATARECOGNITIONCORP.COM	DRC	00:07	00:07	00:13
2	PLSWS22222.DATARECOGNITIONCORP.COM	DRC	00:09	00:05	00:13
1	PLSWS11111.DATARECOGNITIONCORP.COM	TSM	00:03	00:07	00:10
1	PLSWS33333.DATARECOGNITIONCORP.COM	TSM	00:03	00:06	00:09
3	PLSWS33333.DATARECOGNITIONCORP.COM	TSM	00:03	00:06	00:09
3	PLSWS11111.DATARECOGNITIONCORP.COM	TSM	00:03	00:07	00:09
1	PLSWS22222.DATARECOGNITIONCORP.COM	TSM	00:04	00:05	00:08

Showing 1 to 9 of 9 entries | -- Previous | 1 | Next --

The results display for the simulations you selected.

4. For a description of the meaning of the information displayed, refer to the tables on the following page.

Note: The results are sorted by Maximum Duration and Simulation ID. You can click on the column headings to re-sort the data.

Viewing Historical Simulation Data (cont.)

The following tables describe the simulation information that displays.

Summary (Historical)

The historical summary information summarizes simulation results across all of the testing computers in the simulation selected.

Heading	Description
Simulation ID	A system identifier for the simulation.
Average Load Test (min/sec)	The average time for the testing computers in the simulation to load test content.
Average Submit Test (min/sec)	The average amount of time for the computers in the simulation to submit test responses to DRC.
Simulation Date/Time	The date and time the simulation started.
Transmitted Date/Time	The time the simulation results were transmitted to DRC.
Min Duration (min/sec)	The time required for the fastest computer in the simulation to load the test and submit the results.
Max Duration (min/sec)	The time required for the slowest computer in the simulation to load the test and submit the results.

Details (Historical)

The historical detail information shows simulation details for each testing computer in the simulation selected.

Heading	Description
Simulation ID	A system identifier for the simulation.
Computer	The unique name of each computer in the simulation.
Content Source	The source of the test content loaded to the testing computer, DRC or TSM.
Load Test (min/sec)	The time it took the testing computer to load test content.
Submit Test (min/sec)	The time it took the testing computer to submit test responses to DRC.
Duration (min/sec)	The total time it took the testing computer to load the test and submit the results.

■ The Capacity Estimator

The Capacity Estimator is an Excel spreadsheet file that you can download to estimate the following times:

- The time it will take to initially download the test engine, based on the number of students testing.
- The time a student will wait for a test to load with and without content caching. This time is also plotted against the number of students who start testing at the same time.
- The time it will take for a student to receive the next question when he or she is finished with a question (the time required for the testing computer to save the test response and retrieve the next question).

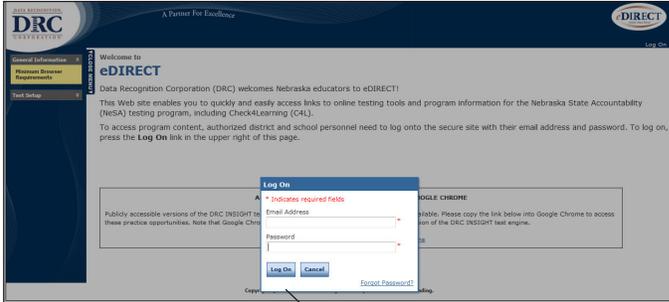
The following is a summary of the process of downloading and using the Capacity Estimator to estimate testing speeds:

1. Download the Capacity Estimator from eDIRECT.
2. Use the speedtest.net website to estimate the download and upload speed of your testing computer.
3. Enter the download and upload estimates from Step 2, as well as the number of students testing, in the Capacity Estimator.
4. Check your results.

This process is discussed in detail on the following pages.

Using the Capacity Estimator

To download and use the Capacity Estimator to estimate your testing response times, perform the following steps from a computer you plan to use for testing.

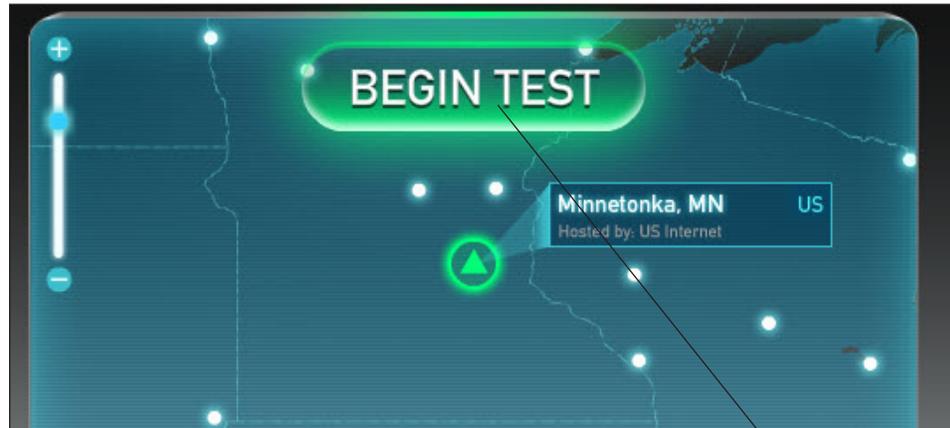


1. Go to the eDIRECT website at <https://ne.drctedirect.com/default.aspx>, log on, and select **General Information** from the Test Setup menu.

Testing Software Downloads					
Title	Platform	Operating Systems	Version	Size	Action
Windows Installer	Windows	XP SP3+, Vista, 7, 8, Server 2003, Server 2008	5.1.0	27.0 MB	
Macintosh Installer	Mac OS	10.6.8, 10.7, 10.8	5.1.0	26.6 MB	
Testing Site Manager (TSM)	Windows	XP SP1+, Vista, 7, Server 2003, Server 2008	6.0.0	30.3 MB	
Testing Site Manager (TSM): Use the installer above to download the Testing Site Manager (TSM), which includes a Local Caching Service (LCS).					
Testing Site Manager (TSM)	Mac OS	10.6, 10.7, 10.8	6.0.0	14.5 MB	
Testing Site Manager (TSM): Use the installer above to download the Testing Site Manager (TSM), which includes a Local Caching Service (LCS).					
Testing Site Manager (TSM)	Linux	Ubuntu 12.04 with Gnome 3.4	6.0.0	34.4 MB	
Testing Site Manager (TSM): Use the installer above to download the Testing Site Manager (TSM), which includes a Local Caching Service (LCS).					
Capacity Estimator	Windows	XP SP3+, Vista, 7, 8, Server 2003, Server 2008	1.0.0	27.0 MB	
Capacity Estimator: This tool estimates testing response times by using the number of students testing, as well as the network capacity and utilization.					

2. Select **Downloads**, locate the Capacity Estimator, and click the Download icon (). Depending on the browser you use, a dialog may display that you can use to specify a location to download the file.

Using the Capacity Estimator (cont.)

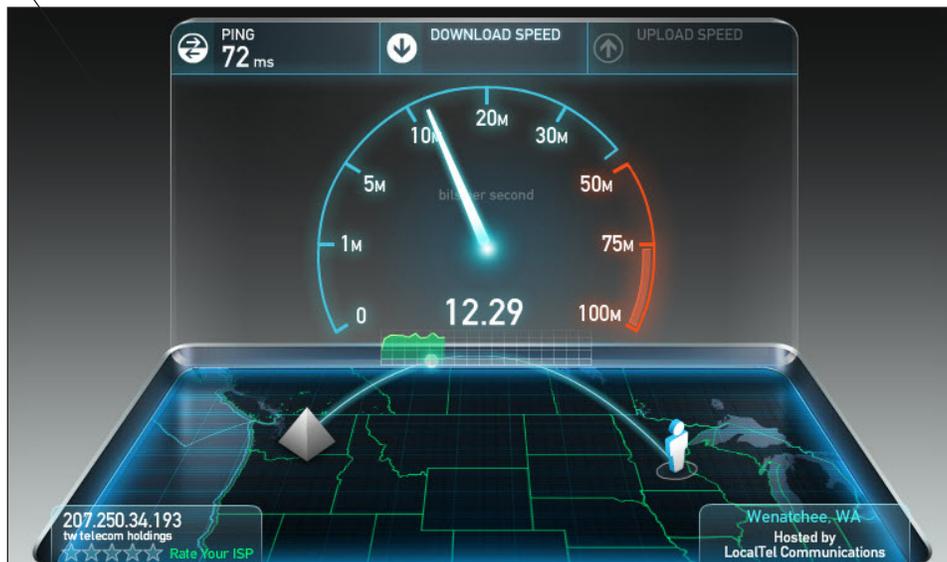


3. Go to the website, www.speedtest.net, and select Minnetonka, MN as the target location for DRC data. Using this location as the target and your location as the source will provide a good simulation of the path your test data will travel during online testing. Click **Begin Test**.

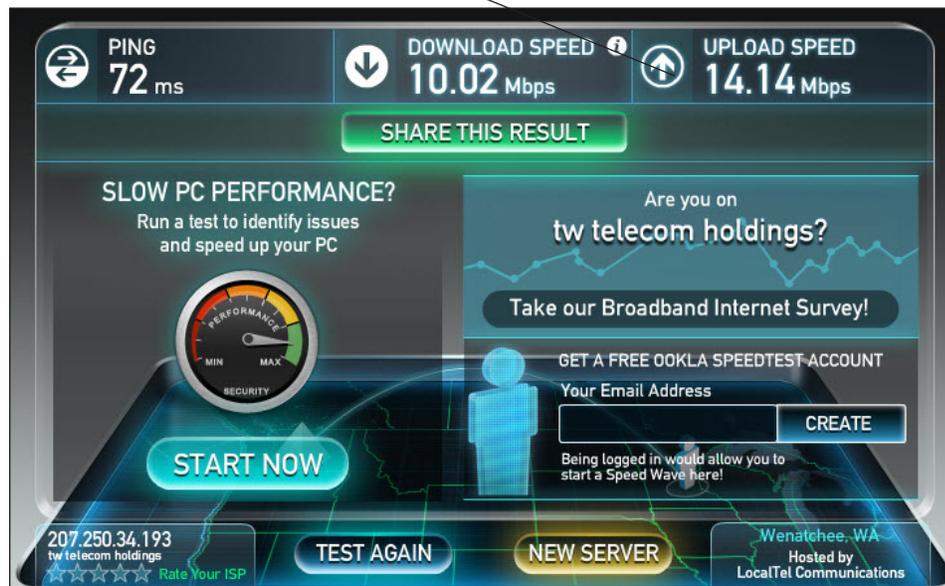


Using the Capacity Estimator (cont.)

4. The speedtest website runs two network tests. One test estimates the download speed of the machine, the other estimates its upload speed.



5. When both tests complete, record the download and upload speed estimates—you need to enter this information into the Capacity Estimator. In this example test, the estimated download speed is 10.02 Mbps and the estimated upload speed is 14.14 Mbps. Your numbers will vary.

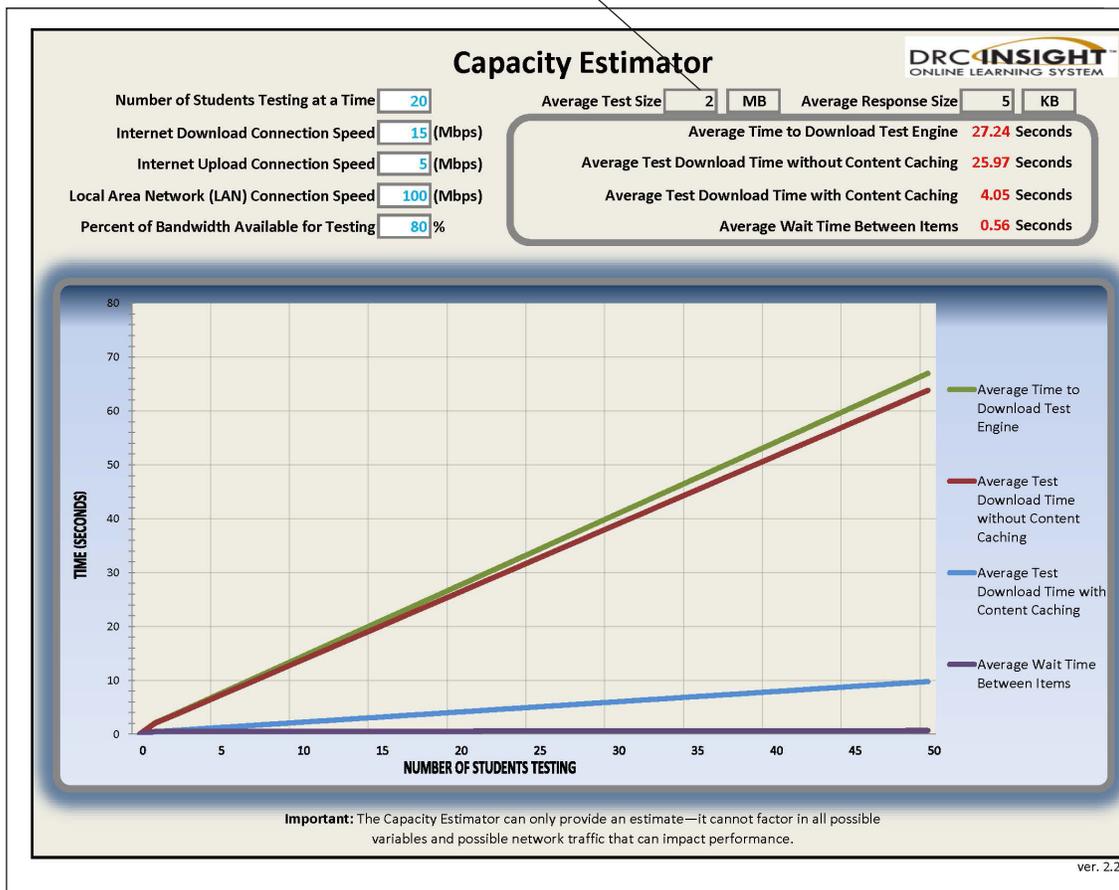


Using the Capacity Estimator (cont.)

6. Open the Capacity Estimator you downloaded in Steps 1 and 2, and enter the download and upload connection speeds, the LAN connection speed, the percent of bandwidth available for testing (your best estimate—typically, 100% minus the amount being consumed by activities other than testing), and the number of students that will start testing at the same time.

Note: The **Average Test Size** and **Average Response Size** fields are fixed fields—you cannot change these values.

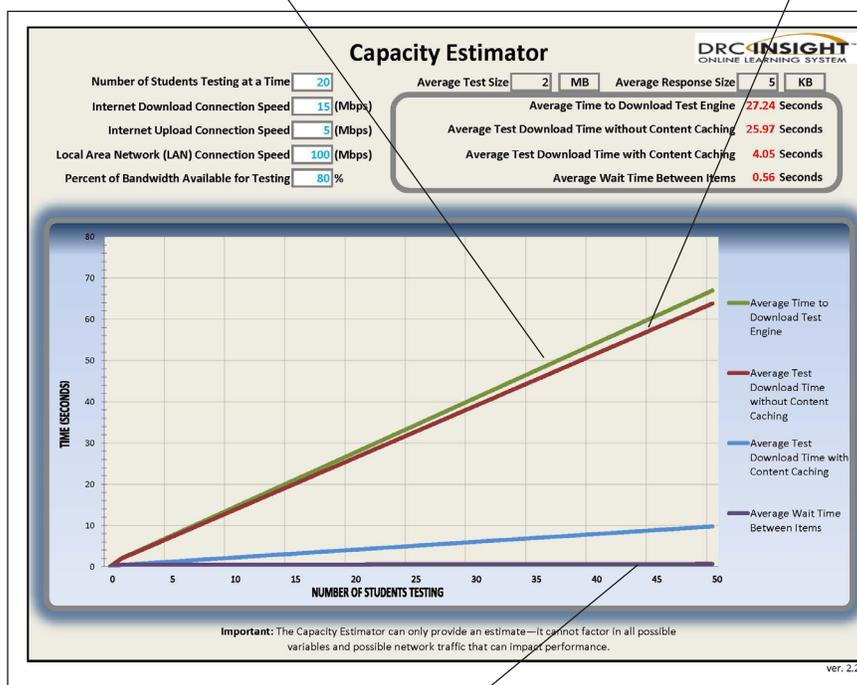
The Capacity Estimator displays the results numerically for the number of students entered, and graphically for up to fifty students.



Using the Capacity Estimator (cont.)

The **Average Time to Download Test Engine** line indicates the time (in seconds) a student will wait for the test engine to download as they log in for testing. This time is plotted against the number of students who start testing at the same time.

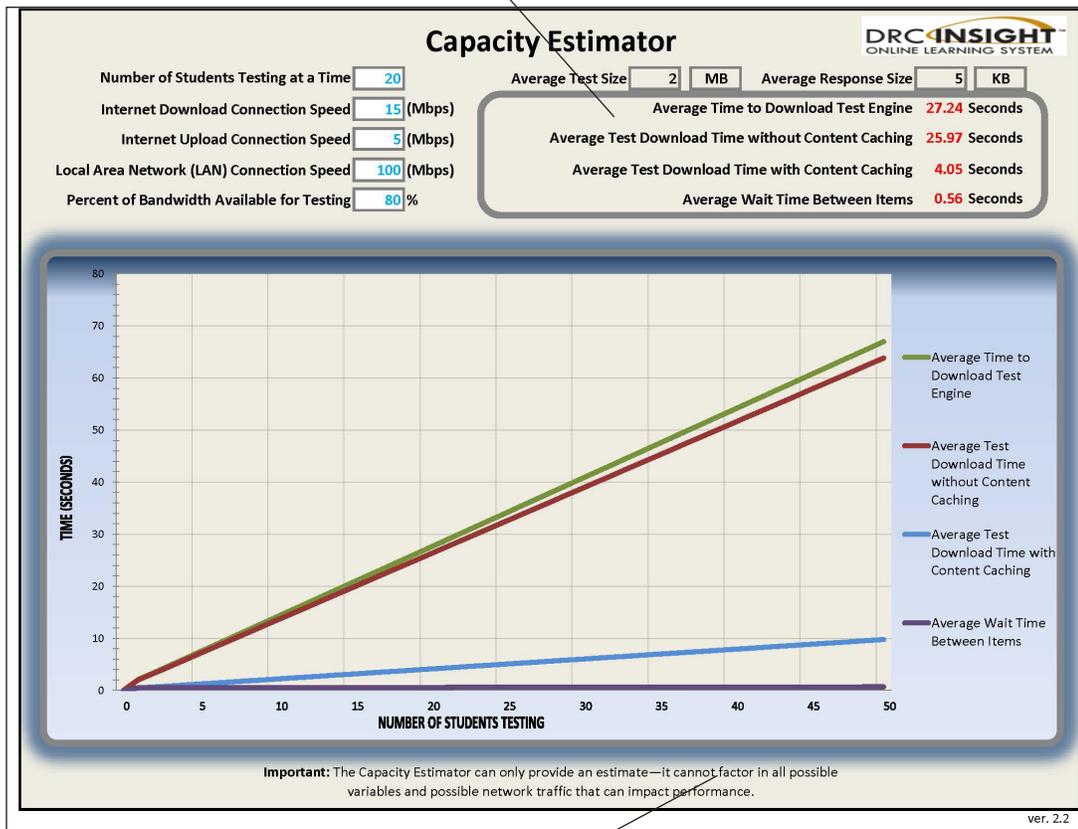
The **Average Test Download Time without Content Caching** line indicates the time (in seconds) the student will wait for the test to load after they click **Select the Test** if they are not using a TSM for content caching. This time is plotted against the number of students who start testing at the same time.



The **Average Test Download Time with Content Caching** line indicates the time (in seconds) the student will wait for the test to load after they click **Select the Test** if they are using a TSM for content caching. This time is also plotted against the number of students who start testing at the same time.

Using the Capacity Estimator (cont.)

The Capacity Estimator displays the information for all of the students testing numerically (rounded to hundredths of seconds) above the graph.



The **Average Wait Time Between Items** line indicates the time (in seconds) the student will wait for the next item when they finish an item and click **Next**.

Note: This estimate tends to be lower because it is calculated using the assumption that all students do not finish an item at the same time (that is, they tend to click **Next** at different times).

■ What is the System Readiness Check?

The System Readiness Check helps you troubleshoot issues that might occur during INSIGHT installation or when INSIGHT is running. It is installed when you install INSIGHT and performs a series of tests you can use to diagnose and prevent or correct most errors easily.

The System Readiness Check verifies that a testing computer meets all of the necessary hardware and software requirements for testing. It also indicates any checks that the testing computer failed and provides suggestions for success.

The System Readiness Check is located in different places on the computer, depending on the type of computer, the operating system, and the state.

■ Windows Systems

For Nebraska, the program is located at C:\Program Files\NE Online Assessments\Readiness. For 64-bit computers, the program is located at C:\Program Files (x86)\NE Online Assessments\Readiness. To run the program, from the **Start** menu select **All Programs–NE Online Assessments–Readiness**.

■ Mac (OS X) Systems

For Nebraska, the program is located at /Applications/NE Online Assessments/Readiness. To run the program, select **/Applications/NE Online Assessments** and double-click on **Readiness**.

■ Linux Systems

For Nebraska, the program is located at /opt/NE Online Assessment System/Readiness. To run the program, right-click on the Readiness file, select **Open**, and select **Run in Terminal**.

Using the System Readiness Check

After installing INSIGHT, use the System Readiness Check to determine whether your testing computers still meet system requirements and to troubleshoot issues.

The **Installation Directory** field indicates the directory where INSIGHT is installed.

The **Machine Name** field indicates the name of the testing computer.

The **OS Level** and **OS Version** fields indicate the operating system and level that is installed on the testing computer.

The screenshot displays the 'System Information' window with the following data:

Client Version		Installation Directory	
5.1.0		C:\Program Files (x86)\NE Online Assessment System	
Machine Name	User Name	OS Level	OS Version
MGWS11274	bbalderson	Microsoft Windows 7 Enterprise Edition Service Pack 1 (build 7601), 64-bit	6.1
Response Caching TSM Connection	Response Caching TSM Configuration	Content Caching TSM Connection	Content Caching TSM Configuration
https://MGWS11274:8443/	Yes	https://MGWS11274:8443/	Yes
HTTPS Proxy			
✓	Screen Resolution		Details
✓	Internet Connection		Details
✓	RAM		Details
✓	Audio Capability		Details
✓	OS Level		Details
✓	User Agent		Details
✓	Response Caching TSM Connection		Details
✓	Response Caching TSM Status		Details
✓	Response Caching TSM Version		Details
✓	Content Caching TSM Connection		Details
✓	Content Caching TSM Version		Details
✓	Client Version		Details
✓	Folder Permissions		Details

Buttons at the bottom: Load Results, Execute Tests, Test Audio, DRC INSIGHT Properties, Exit.

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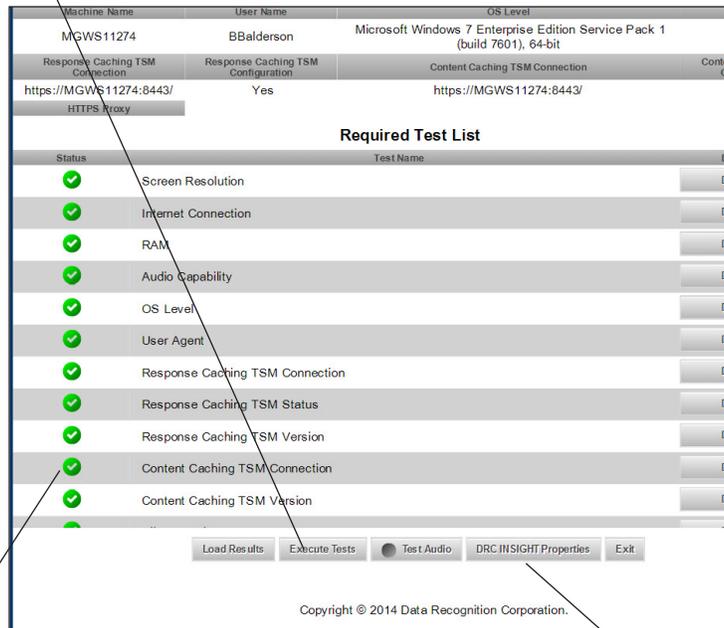
The **HTTPS Proxy** field indicates the URL to the secure proxy server (if configured).

The **Response Caching TSM Configuration** field indicates whether response caching is configured and the **Response Caching TSM Connection** field indicates the URL to the response caching server (if configured).

The **Content Caching TSM Configuration** field indicates whether content caching is configured and the **Content Caching TSM Connection** field indicates the URL to the content caching server (if configured).

Using the System Readiness Check (cont.)

When you click **Execute Tests**, the System Readiness Check runs all of the tests from the required test list and displays the results.



Click **DRC INSIGHT Properties** to display a dialog box you can use to update the connection information for your TSM server, or to enable or disable TSMs (see "Setting DRC INSIGHT Properties" on page 129).

A green check mark icon (✓) indicates that the testing computer passed the test. A red exclamation point icon (!) indicates that the testing computer failed the test. A grey icon (■) indicates that the test is not applicable to the configuration.

System Readiness Check

Using the System Readiness Check (cont.)

You can display details about the System Readiness Check before and after the tests. For a description of these tests, see “The System Readiness Required Tests” on page 123.

When you click **Details** before you execute a test, a window displays a description of the test.

The screenshot shows the System Readiness Check interface. At the top, there is a header with fields for Machine Name (MGWS11274), User Name (bbalderson), OS Level (Microsoft Windows 7 Enterprise Edition Service Pack 1 (build 7601), 64-bit), and OS Version (6.1). Below this, there are sections for Response Caching TSM Connection, Content Caching TSM Connection, and HTTPS Proxy, all with 'Yes' status. A table lists tests with their status (green checkmarks) and 'Details' buttons. The 'Screen Resolution' test is selected, and a modal window is open over it. The modal window contains the following text:

Verifies client version at correct level:Failed
Verifies that you're on a currently validated client.
The client major version is incorrect, please update

At the bottom of the interface, there are buttons for 'Load Results', 'Execute Tests', 'Test Audio', 'DRC INSIGHT Properties', and 'Exit'. The copyright notice 'Copyright © 2014 Data Recognition Corporation.' is visible at the bottom.

When you click **Details** after you execute a test, a window displays the results of the test.

The screenshot shows the System Readiness Check interface after the tests have been executed. The header and connection information are the same as in the previous screenshot. The table now includes a 'Client Version' test with a green checkmark status. A modal window is open over the 'Client Version' test, displaying the following text:

Verifies client version at correct level:Passed
Verifies that you're on a currently validated client.
This is not a secure client.

The 'Folder Permissions' test also has a green checkmark status. The buttons and copyright notice at the bottom are the same as in the previous screenshot.

■ The System Readiness Required Tests

The System Readiness Checks performs a series of required tests to determine whether the computer is ready for online testing. The following table lists and describes each test plus the minimum requirements to pass the test.

Test	Description	Required to Pass
Screen Resolution	Verifies that the screen width and height are sufficient to display the online tests.	A minimum screen size of 800 x 600 pixels.
Internet Connection	Verifies that the computer is connected to the Internet and that the connection speed is fast enough for testing.	The computer and browser must have a ping (connection) time of no more than 250 milliseconds.
RAM	Verifies that the computer has enough memory for online testing.	512 MB of RAM
Audio Capability	Verifies that the computer has the audio capability needed for online testing and/or tutorials.	The computer must have one or more audio channels, be able to play MP3 audio files, and must have a microphone installed.
OS Level	Verifies that the operating system is supported and at a level required for online testing.	See “INSIGHT System Requirements” on page 15 for the supported operating systems.
User Agent	Verifies that the web browser will work for the unsecured, practice tests—the Online Tools Training, or OTT.	An up-to-date Chrome browser.
Response Caching TSM Connection	Verifies that the INSIGHT test engine software on the testing computer can connect to the TSM response caching server.	The connection to the TSM response caching server must be working.
Response Caching TSM Status	Verifies that the TSM contains no unsubmitted student responses.	The TSM must contain no stored responses.
Response Caching TSM Version	Verifies that the version of the TSM response caching server is the most recent.	The TSM response caching server must be the latest version.

■ The System Readiness Required Tests (cont.)

Test	Description	Required to Pass
Content Caching TSM Connection	Verifies that the INSIGHT test engine software on the testing computer can connect to the TSM content caching server.	The connection to the TSM content caching server must be working.
Content Caching TSM Version	Verifies that the version of the TSM content caching server is the most recent.	The TSM content caching server must be the latest version.
Client Version	Verifies that the version of the client software will work with the secure browser.	The base level of the client software must be up to date.
Folder Permissions	Verifies that you have permission to read and write to the installation folder.	Read/write access to the installation folder.

Resolving System Readiness Required Tests

This topic describes various issues you may experience when you run the System Readiness Check tests. It also describes the steps to take to resolve these issues.

Issue 1. Screen Resolution Error

This test verifies that the screen width and height settings meet the minimum system requirements. If it fails, the machine's resolution is not high enough to meet the minimum system requirements. You must change the screen resolution (see "INSIGHT System Requirements" on page 15 for the supported resolution).

Issue 2. Internet Connectivity Error

The testing workstation cannot reach the DRC servers through the Internet. This is usually a firewall or proxy issue. Make sure that everything is whitelisted (see "Question 1: I Don't Know What to Whitelist, Allow, or Unblock?" on page 154).

Starting or Running the System Readiness Application

If the error occurs when you are starting or running the System Readiness application, do the following:

1. Verify that you have no bandwidth issues and that you can reach the DRC servers.
2. The Windows environment does not always capture proxy settings correctly. Usually, Windows uses the Internet Explorer Internet settings. You also can set them using the System Readiness software (see "Setting DRC INSIGHT Properties" on page 129).
3. Contact your Internet Service Provider (ISP) and verify that it is not filtering or throttling your connection with DRC.
4. Verify that you have all of the DRC addresses whitelisted.

Issue 3. RAM Error

This test verifies that the system's memory meets the minimum system requirements. If this test fails, you must upgrade the amount of memory in the computer to meet the minimum system requirements.

Issue 4. Audio Capability Error

This test verifies that the computer has the audio capability needed for online testing and/or tutorials. If this test fails, verify that the computer's sound card is working and that the computer has a valid playback device.

Issue 5: OS Level Error

This test verifies that INSIGHT is running on a supported operating system. If the machine is running a supported operating system, the test verifies that your setup meets the minimum system requirements.

Issue 6. User Agent Error

This test verifies that the web browser is correct for online testing.

Issue 7. TSM Connection Error

The testing client (workstation) is configured to use the TSM, but it cannot connect to it. All of the computers that use the TSM server must be able to connect to the TSM.

Note: The two most common reasons for TSM connectivity issues are difficulty translating the server name into an IP address and not excluding the TSM from the system firewall on the computer where the TSM is installed.

If you are not using the TSM

Turn off the TSM in INSIGHT and do one of the following:

- In the installation directory, edit the properties file `<DRC INSIGHT Install Folder>\DRCCConfiguration.json`, in a text editor (you must have administrator privileges to edit this file), and change the LCSURL parameter string to **"LCSURL" : ""**
- Reinstall INSIGHT and do not use the TSM.

If you are using the TSM

1. From the System Readiness application, verify that the TSM server settings are correct.
2. Verify that the TSM service is running.
3. Verify that the TSM is reachable. Open the TSM both on the computer where the TSM is installed and on some of the machines that are receiving the error.
4. Make sure that any Antivirus/Firewall/Proxy between, or on, the client and server is open. Also, ensure that both the testing client and the TSM are whitelisted.

Note: See “Question 1: I Don’t Know What to Whitelist, Allow, or Unblock?” on page 154 to verify what should be allowed, whitelisted, and unblocked.

5. Try setting the proxy settings manually.
6. Verify that no other web servers are running. Check whether a Virtual Machine (VM) is being used to host the TSM. Make sure no other VMs on the server are running a web server on ports 8080 or 8443.

Issue 8. TSM Response Caching Error

The TSM server has not transmitted all of its stored responses. This test fails if there are stored student responses that have not transmitted.

1. Start the TSM.
2. Select **Response Caching–Unsent Responses**.
3. Verify whether there are unsent tests and click **Transmit Responses** if there are.

Issue 9. TSM Version Error

The TSM is not the latest version. You must uninstall it and reinstall the latest version.

1. Uninstall the TSM (see the Installation sections) and verify that it was uninstalled correctly.
2. Reinstall the TSM from eDIRECT (see the Installation sections).
3. Rerun the System Readiness checks (see “Using the System Readiness Check” on page 119) to verify that the TSM is the latest version.

Issue 10. Client Version Error

The client software (INSIGHT) is not the latest version. You must download the latest version (if you are prompted to update your software, click **Update**).

■ DRC INSIGHT Properties

You use the DRC INSIGHT properties to specify certain system properties for your testing computers (the client systems), your TSM server, and other testing servers. You can do the following:

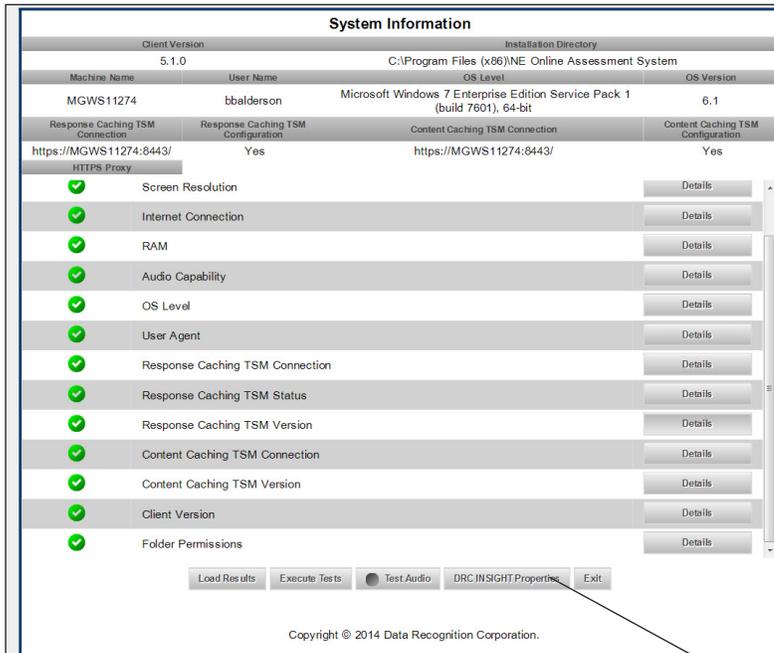
- Enable or disable automatic software updates
- Specify proxy settings for both your unsecured (http) and secured (https) host servers.
- Enable or disable a TSM.
- Specify which server is the content caching and/or load simulation TSM server, and the port it uses for communication.
- Specify which server is the response caching TSM server and the port it uses for communication.
- Select the district and school name associated with the testing computer (required for Load Simulation Testing*).

*The Load Simulation Tool is software that simulates and tests both the load and route of the data from the testing workstation to the DRC servers to help ensure that everything is set up correctly for testing (see the topics “Load Simulation Testing” on page 101 and “Load Simulation Testing Questions” on page 153).

You specify these properties by selecting **DRC INSIGHT Properties** (see “Setting DRC INSIGHT Properties” on page 129).

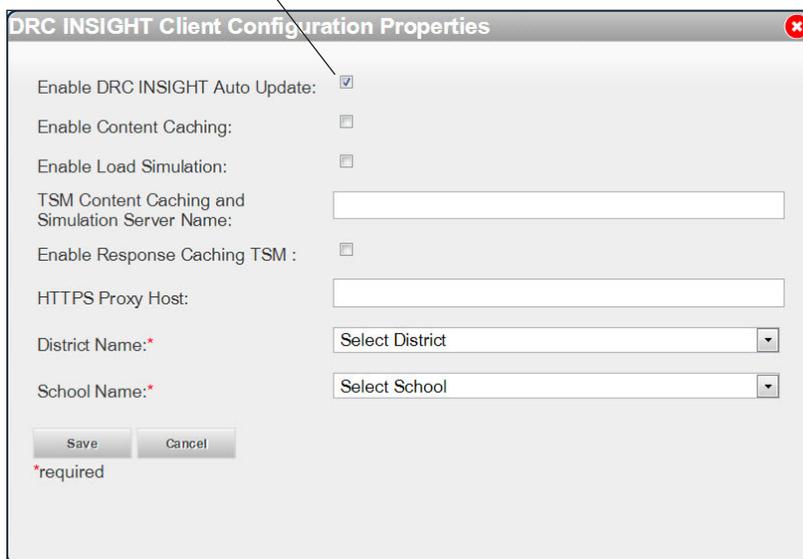
Setting DRC INSIGHT Properties

When you select DRC INSIGHT Properties from the Required Test List window, a dialog box displays that you can use to enable or disable automatic software updates, specify the path to the TSM server you use for content caching and/or load simulation tests, the path to the TSM server you use for response caching, the path to a secure proxy host, and the name of the district and school associated with the testing computer.



You can enable or disable Auto Updates of the INSIGHT software (“INSIGHT Software Updates” on page 18).

Click **DRC INSIGHT Properties** to display the DRC INSIGHT Configuration Properties dialog box. From this dialog box you can review your INSIGHT configuration and make changes to it.



Setting DRC INSIGHT Properties (cont.)

To specify a server to use for load simulations, check **Enable Load Simulation** and enter the server name (or IP address*) and port number (separated by a colon) in the TSM Content Caching and Simulation Server Name field.

To specify a server to use for test content caching, check **Enable Content Caching** and enter the server name (or IP address*) and port number in the TSM Content Caching and Simulation Server Name field.

To specify a server to use for test response caching, check **Enable Response Caching TSM** and enter the server name (or IP address*) and port number (separated by a colon) in the TSM Response Caching Server Name field that displays.

DRC INSIGHT Client Configuration Properties

Enable DRC INSIGHT Auto Update:

Enable Content Caching:

Enable Load Simulation:

TSM Content Caching and Simulation Server Name:

Enable Response Caching TSM :

TSM Response Caching Server Name:

HTTPS Proxy Host:

District Name:*

School Name:*

*required

To specify a proxy HTTPS (secured) Host to use for the TSM, enter the server name (or IP address*) and port number (separated by a colon) in the HTTPS Proxy Host Name field. You must restart the testing computer to make this change.

Select the district and school for the testing computer from the **District Name** and **School Name** drop-down menus. The school and school district names are used for the reports generated from the load simulations tests.

Click **Save** to save your changes or **Cancel** to cancel them.

! Important: *A TSM server should have a static IP address (an IP address that does not change when the computer is restarted or rebooted). If the IP address of a TSM machine changes, you must re-configure the testing computers that connect to that TSM.

Setting DRC INSIGHT Properties (cont.)

The screenshot shows the 'System Information' window with the following data:

Client Version		Installation Directory	
5.1.0		C:\Program Files (x86)\NE Online Assessment System	
Machine Name	User Name	OS Level	OS Version
MGWS11274	bbalderson	Microsoft Windows 7 Enterprise Edition Service Pack 1 (build 7601), 64-bit	6.1
Response Caching TSM Connection	Response Caching TSM Configuration	Content Caching TSM Connection	Content Caching TSM Configuration
https://MGWS11274:8443/	Yes	https://MGWS11274:8443/	Yes
HTTPS Proxy			
✓	Screen Resolution	Details	
✓	Internet Connection	Details	
✓	RAM	Details	
✓	Audio Capability	Details	
✓	OS Level	Details	
✓	User Agent	Details	
✓	Response Caching TSM Connection	Details	
✓	Response Caching TSM Status	Details	
✓	Response Caching TSM Version	Details	
✓	Content Caching TSM Connection	Details	
✓	Content Caching TSM Version	Details	
✓	Client Version	Details	
✓	Folder Permissions	Details	

At the bottom of the window, there are buttons for 'Load Results', 'Execute Tests', 'Test Audio', 'DRC INSIGHT Properties', and 'Exit'. The copyright notice at the bottom reads: 'Copyright © 2014 Data Recognition Corporation.'

If you made any configuration changes, the System Information window displays the results of the System Readiness Check tests for those changes.

Notes:

Appendix A: Troubleshooting



■ What's Covered in This Appendix

This Appendix describes some of the more common error messages you may encounter while installing, configuring, and using DRC INSIGHT, and provides recommendations to resolve them.

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

Common Error Messages

This topic describes common INSIGHT and Testing Site Manager (TSM) error messages and methods to resolve them.

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 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 “Issue 7. TSM Connection Error” on page 126).

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:

1. Retry the update.
2. Verify your whitelisting settings.
3. Manually update the testing client.

Message: *Idle Error -- Responses Stored*

Your session has been ended due to inactivity. Please click the OK button to proceed.

Description: The test session ended due to inactivity and auto shut down testing.

What Should I Do? The student testing should log in again and continue testing after the responses have been transmitted from the TSM.

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 (if connected).

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 (see “Issue 2. Internet Connectivity Error” on page 125).

Message: *No TSM Configured*

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

Description: The testing client is trying to log into 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.

Message: *Previous Login May Have Unsent Responses*

The responses for the student’s previous login to this test may have used a Testing Site Manager (TSM). The student cannot continue testing until any stored responses are sent. Please contact your local IT staff to check for unsent responses. They can contact DRC Customer Support if they need additional help to resolve the matter.

Description: The last login for this ticket saved responses, or tried to save responses, to the TSM. This login is either not connecting to the same TSM, or is not connecting to any TSM. The testing client must verify that there are no unsent responses on the previous TSM before the student can continue testing.

What Should I Do? The testing client must connect to the same TSM as their previous login to verify that there are no unsent responses. Start the TSM, select **Response Caching–Unsent Responses**, and click **Transmit Responses**.

Message: *Previous Login with Unsent Responses*

The responses for the student's previous login to this test are still stored on the Testing Site Manager (TSM). The responses must be sent by the TSM before the student can continue testing. Please contact your local IT staff to send the responses. They can contact DRC Customer Support if they need additional help to resolve the matter.

Description: The last login for this ticket saved responses to the TSM and they have not been submitted yet.

What Should I Do? Submit the unsent responses. Start the TSM, select **Response Caching–Unsent Responses**, and click **Transmit Responses**.

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 login again.

Message: *Session Status Outside Window*

Testing is currently unavailable. Please contact an administrator.

Description: The test ticket that is trying to be logged into is in a test session where the window is not active.

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

Message: *Test Exit! Responses Stored on TSM*

There has been an interruption in Internet connection. 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 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: During testing the testing client lost connection with DRC. The test continued while saving responses to the TSM. The test has not been completed, so before the student can continue testing, the TSM must submit the responses for the student.

What Should I Do? Make sure the TSM submits all the unsent responses. The student will not be able to continue testing until the responses are submitted. From the TSM, select **Response Caching–Unsent Responses**, and verify that the TSM displays **No unsent responses!** If there are unsent responses, click **Transmit Responses**. If that doesn't work, contact your System Administrator, or see "Issue 2. Internet Connectivity Error" on page 125.

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 (see "Question 2: How Do I Update Test Forms in a TSM?" on page 155).

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 2: How Do I Update Test Forms in a TSM?" on page 155).

Message: *Testing Complete! Responses Stored on TSM*

There has been an interruption in Internet connection. All of the student's responses have been saved to the Testing Site Manager (TSM). The TSM will send the responses for scoring. Please contact your local IT staff to confirm 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: During testing the testing client lost connection with DRC. The test continued while saving responses to the TSM. The test has been completed.

What Should I Do? Make sure the TSM submits all the unsent responses. From the TSM, select **Response Caching–Unsent Responses**, and verify that the TSM displays **No unsent responses!** If there are unsent responses, click **Transmit Responses**. If that doesn't work, contact your System Administrator, or see "Issue 2. Internet Connectivity Error" on page 125.

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 -- Responses May Be Stored*

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 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. Restart the TSM. If that doesn't work, contact your System Administrator, or see "Issue 7. TSM Connection Error" on page 126).

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 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 Response Caching Configuration Error*

The Testing Site Manager (TSM) is not configured to store student responses. Enter a different TSM for Response Caching. Please contact DRC Customer Support if you need additional help to resolve this matter.

Description: The testing client is configured to save responses to the TSM but the TSM is not configured to save responses.

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

Message: *TSM Response Caching Error*

The Testing Site Manager (TSM) is not configured to store student responses. The student responses will not be saved to the TSM. Please contact your local IT staff to update your student response caching configuration. They can contact DRC Customer Support if they need additional help to resolve this matter.

Description: The testing client is configured to save responses to the TSM but the TSM is not configured to save responses.

What Should I Do? Either the client must be set to not save responses to the TSM, or the TSM must be configured to save responses. There is an issue with response 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. The correct URLs are as follows:

BaseURL: <https://wbte.drccdirect.com/NE/>

StartupURL: <https://wbte.drccdirect.com/NE/portals/ne/>

UpdateURL: <https://ne-insight-client.drccdirect.com/Download/SecureBrowser/VERSIONS.txt>

What Should I Do? Fix the URL in the .json file. The file is located at the following locations:

Windows 32-bit

C:\Program Files\NE Online Assessments\DRCCConfiguration.json

Windows 64-bit

C:\Program Files (x86)\NE Online Assessments\DRCCConfiguration.json

Macintosh

/Applications/NE Online Assessments/DRCCConfiguration.json

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 Auto Update. Enable and run Auto Update, or install the update (upgrade) manually.

Notes:

Appendix B: FAQs



■ What's Covered in This Appendix

This Appendix contains a list of frequently asked questions and answers about configuring, installing, and using DRC INSIGHT and the Testing Site Manager (TSM) software. The questions and answers cover the Windows, Macintosh (OS X), and Linux environments.

All of the questions are technical in nature and they are divided into categories, including General Questions and Common Technical Questions and Answers. The Common Technical Questions and Answers cover the common technical support issues you may encounter, and provide tips, techniques, and workarounds to resolve them.

■ General Questions

Q: 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.

Q: 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.

Q: 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: There is nothing built into the software.

Q: 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) version uses a .dmg file for the TSM and a .pkg file for INSIGHT.
- The Linux version uses a .deb file for the TSM and a .sh file for INSIGHT.

Q: 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 C:\Program Files (x86)\TestingSiteManager. After you remove the TSM, if this folder still exists, delete it before you reinstall the TSM.

Q: 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.

Q: Do we need to go to each student's computer to enable automatic updates?

A: No. Just remember to enable automatic updates when you install the INSIGHT software. After installation, INSIGHT automatically checks for software updates and installs them whenever it is launched.

Q: How are test responses received?

A: It depends on whether a TSM is installed and how it is configured.

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.

If a TSM is installed and configured for response caching

If there is an interruption in internet connectivity, a student's testing computer starts sending the test responses to the TSM. The TSM tries to submit them to DRC every fifteen minutes. The student continues sending responses to the TSM until the student completes the test, pauses, or exits and logs back in.

Note: Students cannot log back in while their responses are still on the TSM.

If 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.

Q: How do I test that a TSM is working?

A: Start the System Readiness Check on a testing computer.

This software is in the installation directory of the testing client. For example, on a Windows 7 machine (64-bit), a shortcut to the software is located at C:\Program Files (x86)\NE Online Assessments\Readiness.

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.

- 3a.** If you have content caching configured, check the results for Content Caching TSM Connection, Content Caching TSM Status, and Content Caching TSM Version.
- 3b.** If you have response caching configured, check the results for Response Caching TSM Connection, Response Caching TSM Status, and Response 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 NE **Online Assessments**, select **Online Tools Training**, sign in, and take a training test to verify that you can connect to the TSM.

Q: 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.

Q: The sound for Text-To-Speech does not work. What should I do?

A: Run the System Readiness Checks and verify that the sound (Audio Capability) is working (see “Resolving System Readiness Required Tests” on page 125). Adjust the volume before testing.

■ Capacity Estimator Questions

Q: What is the Capacity Estimator?

A: The Capacity Estimator is an Excel spreadsheet file designed to help schools and school districts estimate the time it will take their students to download tests initially and move to the next question after they finish a question. The time estimates the tool creates are based on the following:

- The site's knowledge of the speed of their internal network
- The calculated estimated speed of the external network connection to DRC
- The estimated number of students testing concurrently

This tool was created to help sites plan their testing more effectively based on a number of factors, including the current network traffic and the number of students testing.

Q: What does the Capacity Estimator estimate?

A: The Capacity Estimator estimates four different time values:

- The Average Time to Download Test Engine—the time (in seconds) the student will wait for INSIGHT to download as they login for testing.
- The Average Test Download Time without Content Caching—the average time (in seconds) it takes to download a test without content caching.
- The Average Test Download Time with Content Caching—the average time (in seconds) it takes to download a test with a TSM and content caching.
- The Average Wait Time Between Items—the average time (in seconds) required to save a response and load the next test question.

Q: Are these estimates for each student, or for all students testing?

A. The two Average Test Download Times estimate the time each student will experience to download a test if *all* of the students start testing at the same time. The Average Wait Time Between Items estimates the time for an individual student, since students finish questions at different times.

Note: The calculations represent conservative estimates. The Capacity Estimator can only provide an estimate—it cannot factor all possible variables, including network and Intranet traffic, that can impact performance.

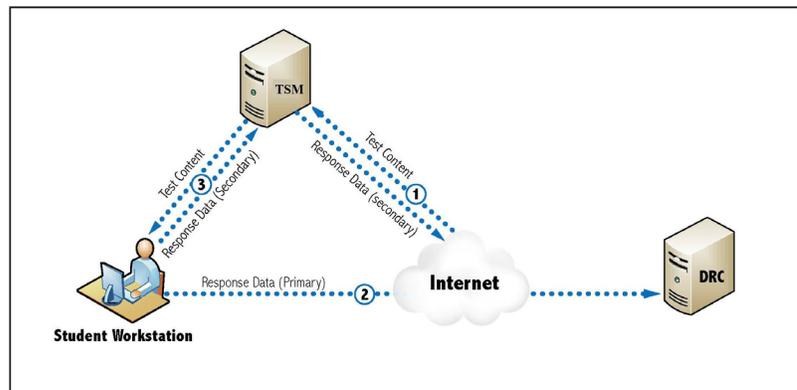
Q: What information does the site have to supply?

A. The site needs to supply five numbers (for the numbers ①②③, refer to the figures below):

- The Internet download speed ①
- The Internet upload speed ②
- The Local Area Network (LAN) speed ③
- An estimate of the percentage of bandwidth that is currently available.

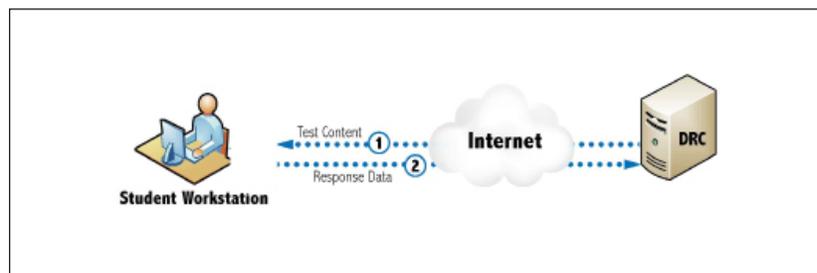
Because testing is probably not the only process running on your LAN and Wide Area Network (WAN), each site must estimate how much capacity these other processes are consuming, subtract that estimate from 100, and enter the result in the Percent of Bandwidth Available for Testing field.

- The number of students testing at a given time.



Testing With a TSM

Note: The primary path is the data path used when test responses are being sent directly through the Internet and stored on the TSM; the secondary path is the data path used when responses are also being sent from the TSM (the Internet connection was interrupted).



Testing Without a TSM

Q: Is it possible to arrive at different estimates for these numbers using other software tools?

A. Yes. For example, we recommend using Speedtest.net to determine your download and upload speeds back to Minnesota. Other software tools might connect to servers that are different distances away and use different Internet paths to reach those servers.

Note: The Load Simulation Tool is designed to simulate DRC's testing traffic.

Q: What does “number of students testing” mean?

A: The number of students testing is the number of students on your school or district network who will download tests at roughly the same time (students who will start testing within a few seconds of each other). All students do not start a test at the same time, so this number is really used to estimate what would happen at maximum load (for more information, see the next question).

Q: Could you provide an example of how we would use the Capacity Estimator?

A. Yes, see below.

Assume that 10 students are testing at the same time in a computer lab, with a typical download speed of 25 Mbps, an upload speed of 5 Mbps, a LAN speed of 100 Mbps, and 80% of the total bandwidth available. According to the Capacity Estimator:

- The Average Time to Download Test Engine (the time the student will wait for INSIGHT to download as they login for testing) is 8.67 seconds.
- The Average Test Download Time without Content Caching (the time required to download the test) is 8.29 seconds.
- The Average Test Download Time with Content Caching is 2.15 seconds.
- The Average Wait Time Between Items (the time required to save a response and load the next test question) is .53 seconds.

■ **Load
Simulation
Testing
Questions**

Q: What is the Load Simulation Tool?

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

Q: How many testing computers 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. At each school, each simulation should include as many testing computers as possible to help you assess the school's readiness.

Q: How many times should I run the simulation?

A: DRC recommends that you run the simulation three times during the timeframe you have established for load simulation testing. Run it twice specifying the TSM as the source for form content, and run it once specifying DRC as the source for form content (see "Load Simulation Testing" on page 82).

Q: What metrics are reported?

A: A load simulation test reports the following results for the individual testing computers:

- 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 computer, 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, refer to the topic, "Load Simulation Testing" on page 82.

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

A: As a result of Technology Readiness Assessments that DRC has performed, we suggest that the test load time should be less than 60 seconds. Ideally, individual test response times should be less than one second, but a district may determine that up to two seconds is acceptable.

Districts should analyze their results and set what they feel are acceptable response times for their students. If necessary, they can make adjustments to their technical configurations and/or the number of students testing at any one time.

Common Technical Questions and Answers

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

Question 1: I Don't Know What to Whitelist, Allow, or Unblock?

The following is a list of the items to include (for more information, see the topic “Network Requirements for Testing Computers” on page 19):

- Allow or enable http/https protocols on ports 80/443.
 - ⓘ **Important:** To avoid potential conflicts, verify that no other device is using either port. For Windows 7, you can enter the command **netstat -a** from a command prompt to display the list of ports currently being used.
- Allow connectivity on ports 80 and 443.
- Whitelist the following file types, both internally and externally:
 - **enc exe** (for updates) **gif html jar jpeg xml**
- Prioritize and whitelist INSIGHT traffic on:
 - Firewalls Internet packet shaper routers switches proxies
 - Other network devices you use
- Allow whitelist access for content. Try these links in a browser window to see if you have access:

Link	Displays a blank page with a label similar to...
http://ne-insight-client.drcedirect.com/	insightwebdl01
https://ne-insight.drcedirect.com/ping.html	54 systemonline
https://wbte.drcedirect.com	no label

Notes:

- When whitelisting, you may need to use *.drcedirect.com instead of ne-insight.drcedirect.com.
- 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.
- Each state uses its own URLs and IP addresses to communicate from the INSIGHT client (workstation) software to DRC servers, or from the TSM server to DRC servers.

State	URL	IP Address	Port/Protocol
Nebraska	http://ne-insight-client.drcedirect.com	50.58.190.64	80/http; 443/https
	https://ne-insight.drcedirect.com	50.58.190.63	80/http; 443/https
	https://wbte.drcedirect.com	50.58.190.53	80/http; 443/https

Question 2: 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 in 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.

2. Change **localhost** to the IP address or server name of the computer where the TSM is installed.
3. Select any optional media files (TTS) that need to be updated (if applicable).
4. If the status of any content changes to Out of Date, click the **Update** button.

Note: It takes awhile for the TSM to update. Wait for the screen to refresh and all of the content to display the status **Up to Date**.

Question 3: Can We Mass Deploy the Test Software to All of the 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

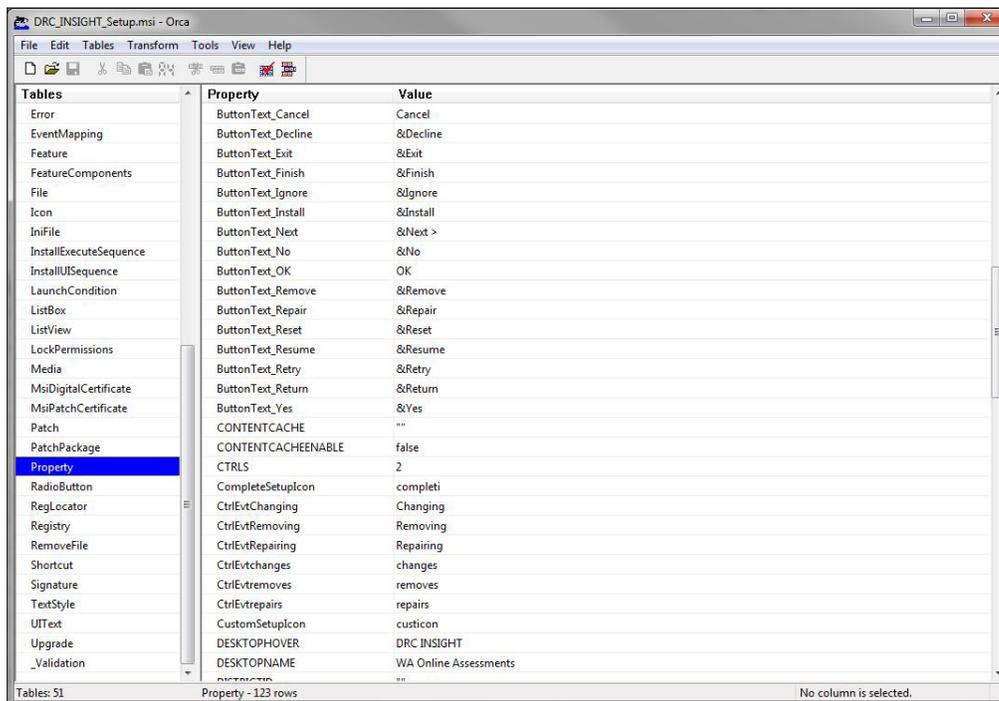
You can modify the DRC_INSIGHT_Setup.msi installation file to install your software on many machines using different installation settings. To modify the file, you need the ORCA installer package from the Windows SDK for Windows Installer Developers. This package is available at the following location:

<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 Figure B-1). Make all of your changes in this table.



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

Figure B–1: Property Table

4. The following are the different properties you may want to 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.
- For DISTRICT_NAME, DISTRICTID, SCHOOL_NAME, and SCHOOLID, use the name and/or numeric code from the locations file located at <https://ne-insight.drceirect.com/InsightClientRESTServices/ClientRESTService.svc/locations>.
- Ignore the ADMINID and ADMINNAME properties.

AUTOUPDATEFLAG

Turns automatic updates on or off. True enables automatic updates.

ENABLELCS

Enables a TSM for response caching. If true, use LCSURL to specify the TSM server that will perform response caching.

LCSURL

The name or IP address of the TSM response caching server. The default value is `https://localhost:8443/`. Replace localhost with the name or IP address of the TSM response caching server.

LOADSIMULATIONENABLE

Specifies that load simulation testing is enabled for the testing computer. If true, include CONTENTCACHEENABLE set to true and CONTENTCACHE to specify the TSM server that will perform load simulation tests. You also must specify DISTRICT_NAME, DISTRICTID, SCHOOL_NAME, and SCHOOLID.

DISTRICT_NAME

The district name for load simulation testing.

DISTRICTID

The district ID for load simulation testing.

SCHOOL_NAME

The school name for load simulation testing.

SCHOOLID

The school ID for load simulation testing.

CONTENTCACHEENABLE

Enables a TSM for content caching. If true, use CONTENTCACHE to specify the TSM server that will perform content caching.

CONTENTCACHE

The URL and secure port of the TSM server that caches test content and performs load simulation tests. The default value is `https://localhost:8443/`. Replace localhost with the name or IP address of the TSM content caching server.

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.*

```
DRC_INSIGHT_Setup.msi /qn
```

Silent Uninstall Example

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

```
msiexec /x DRC_INSIGHT_Setup.msi /qn
```

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

Glossary



■ Accommodation

Modifications or enhancements made to tests, or test environments, that allow students with physical or learning disabilities, or a limited English-language ability to more accurately demonstrate their knowledge and skills in an assessment situation (see *Text-To-Speech*).

■ Capacity Estimator

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

- The time it will take to initially download the test engine, based on the number of students testing.
- The time a student will wait for a test to load, with and without content caching, plotted against the number of students who start testing at the same time.
- The time it will take for a student to receive the next question when he or she is finished with a question (the time required for the testing computer to save the test response and retrieve the next question).

■ Content Caching

The Testing Site Manager (TSM) can cache test content. At test time, the TSM content caching software sends its cached test items to the testing computers. This content must be up to date in order for students to test. DRC strongly recommends TSM content caching for maximum performance (see *Response Caching*).

■ DRC INSIGHT 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 Learning System consists of a secure web browser testing interface and the Testing Site Manager (TSM) to help manage network traffic, maintain connectivity, and handle bandwidth issues (see *Testing Site Manager*).

■ 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 computer. 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.

■ Dynamic IP Address

An IP address that can change when the computer is restarted or rebooted based on the pool of IP addresses that are available at the time (see *Static IP Address*).

■ Kiosk Mode

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

■ Latency

When the TSM “pings” the IP address of the DRC server, the network sends data packets from the TSM to the DRC server and back. The network also calculates the time, in milliseconds, it takes for the data to be received. The longer this time is, the longer it has taken the DRC server to receive the data packets (usually because of excess network traffic).

This 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.

■ Load Simulation Test (LST)

A software test used to perform load simulations to help estimate the amount of time it will take to download tests and upload responses. For individual testing computers, a load test simulation reports the following results:

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

■ 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.

■ Response Caching

The TSM can cache student test responses. During testing, if the test computers cannot communicate with the DRC INSIGHT server, the TSM response caching software buffers and stores their test responses.

When the response caching software is communicating with DRC, it sends test responses to the DRC INSIGHT server every fifteen minutes. Even if DRC is not currently communicating with the testing computers, the test responses are still being stored on the TSM for transmission to DRC, so no responses are lost. DRC strongly recommends the TSM response caching software for maximum performance (see *Content Caching*).

■ **Static IP Address**

An IP address that is permanently assigned to a computer and does not change when the computer is restarted or rebooted (see *Dynamic IP Address*).

■ **System Readiness Check (SRC)**

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

■ **Testing Site Manager (TSM)**

DRC's powerful, web-based application that works with DRC INSIGHT to provide caching and a software toolbox to help you plan, configure, and manage your online testing environment.

The TSM offers two types of caching—content caching for test content and response caching for student test responses. The TSM caching software is installed on one or more strategic computers with sufficient bandwidth to help manage and streamline communication between the test computers and the DRC INSIGHT server. A TSM typically reduces bandwidth traffic for schools by about 50% when downloading test content. DRC strongly recommends the TSM for maximum performance (see *Content Caching* and *Response Caching*).

■ **Text-To-Speech (TTS)**

An optional testing accommodation offered with DRC INSIGHT that allows a student to hear the test recorded by a computer-simulated voice.

■ **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.

■ **Virtual Desktop Infrastructure (VDI)**

A computer environment in which a computer hosts a desktop operating system within a virtual machine running on a central server.

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Notes:



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