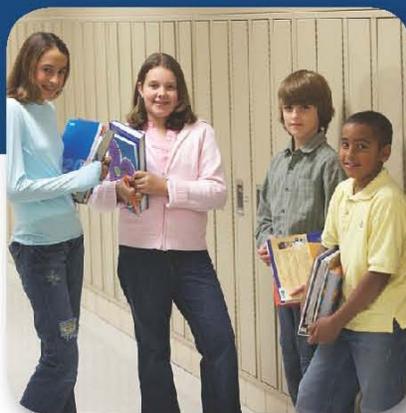
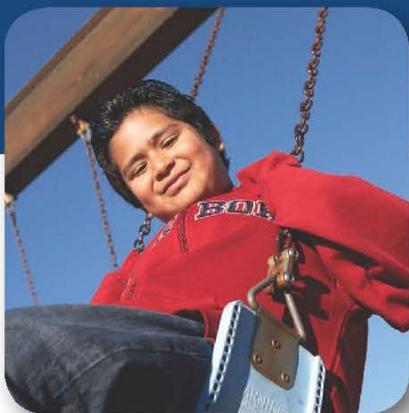


# Assessing Online Testing Readiness



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## OVERVIEW

This document is a guide for evaluating a site's ability to administer DRC INSIGHT online assessments. It contains several questions to assess various factors sites should consider when making the decision to administer online testing. For each question, there is a corresponding checkbox. Sites should check each box when they are confident they can perform the task or answer the question presented. The more boxes that are checked, the more likely it is that a site will be able to deliver a successful online testing experience to students.

## CATEGORIES

The questions are organized into the following categories:

- Technology – Testing Device
- Technology – Central Office Services (COS) Service Device
- Technology – Network Configuration
- Training

Assessing these categories will help sites determine readiness to deliver online testing.

### Technology

Determining the availability of supported devices and peripherals, as well as whether the network infrastructure is sufficient to administer online assessments, are key factors for delivering a good student experience.

- **Testing Device**
  - Does the site have the supported testing devices required for online testing?
  - Does the site have enough testing devices to complete online testing during the allowed testing window?
- **Central Office Services (COS) Service Device**
  - Does the site have the required device(s) to run the number of COS Service Devices required to support the site's online testing?
- **Network Configuration**
  - Does the site have the network **capacity** and **reliability** (Wireless, LAN, WAN, and Internet) to support the number of students testing at one time?

### Training

An important factor in successful online testing is adequately preparing the people involved in delivering and taking the tests. Will the site provide enough time for **students**, **educators**, and **technology support staff** to review the training materials and become familiar with the online testing technology?

## ASSESSING ONLINE TESTING READINESS

### TECHNOLOGY – TESTING DEVICE

- Taking into account potential for students moving into and out of the site, can you estimate the number of students who will be taking online tests?
- Using the estimated number of students and the length of the test window, determine how many students will need to test each day. Factor in other activities occurring at the site that may affect access to testing devices or limit available network bandwidth.  
Does the online testing site have adequate rooms and appropriate space to conduct testing?
- After reviewing the DRC INSIGHT System Requirements, does the site have testing devices that meet the system requirements?
- After determining the number of devices needed to complete online testing and the number of students a site needs to test, does the site have enough supported devices to deliver online testing within the test window?

Determine the number of tests a site can support using the following variables:

- ❖ Number of testing devices available at the site that meet the system requirements
- ❖ Number of hours a testing device can be used in a day
- ❖ Number of days in the test window a site plans to test
- ❖ Number of hours each test session or part requires

#### Example Calculation

20 computers × 6 hours per day = 120 total hours/day

120 total hours per day × 24 days in the testing window = 2880 total testing hours

2880 total hours / 2 hours for a test = 1440 total test sessions/parts the site could support

Determine the number of expected test sessions/parts using the following variables:

- ❖ Number of students to be tested
- ❖ Number of test sessions/parts each student will be taking

#### Example Calculation

600 students × 2 test sessions/parts each = 1200 total test sessions/parts

The number of expected test sessions/parts should be less than the number of tests a site can support.

The formula is more complicated when a site is planning to test multiple subjects and grades because testing times vary by subject and grade.

DRC has devised a simple calculation tool called the **Computer Usage Estimator** that can help districts and schools determine whether there are enough devices to deliver online testing. The **Computer Usage Estimator** can be used to plan for a whole site or individual testing labs.

- Does the site have enough technology peripheral equipment (e.g., headsets, mice, iPad stands, keyboards, station dividers, etc.) to deliver online testing within the test window?

### TECHNOLOGY – CENTRAL OFFICE SERVICES (COS) SERVICE DEVICE

- After reviewing the DRC INSIGHT System Requirements, does the site have device(s) available that meet the COS Service Device system requirements?
- Does the site have support staff to install and maintain a COS Service Device?

## TECHNOLOGY – NETWORK CONFIGURATION

- Review the district and school network capacity (LAN, WAN, and ISP) to administer online testing. Verify that there is available capacity for the number of students taking the test at the same time. Take into account competing Internet bandwidth and other traffic in the building at the time of testing.

Estimate the required bandwidth for transferring test content available from the student testing devices to the location of the test content (test content could be on a local COS Service Device at the site, on a central COS Service Device at another site, or at DRC if there is no COS Service Device for content hosting):

- Up to 25 Concurrent Testers: 50 Mb
- 26–150 Concurrent Testers: 100 Mb
- 151–500 Concurrent Testers: 200 Mb
- 501–900 Concurrent Testers: 400 Mb
- 901–1000 Concurrent Testers: 800 Mb
- >1000 Concurrent Testers: >1 Gb

Use the **Capacity Estimator** to help determine bandwidth requirements.

Is the available bandwidth for the school sufficient to support online testing and the number of students testing at one time?

- Connection and bandwidth requirements are greatest at the beginning of the test when the student is logging in to the test and the test engine and test content are being downloaded to the testing device. This process requires a connection from the testing device to DRC. Does the district and school network have the network reliability (LAN, WAN, and ISP) needed to administer online testing?
- Are the firewall and filters on the computer network configurable to allow communication with the online servers and can the necessary URLs be whitelisted?
- Can the site use network shaping to give DRC INSIGHT testing traffic priority over other network traffic?
- Will you be able to schedule and manage network bandwidth allocation during testing? For example, limiting the amount of high-bandwidth activities such as downloading and watching videos.
- If the site is using wireless connectivity, complete a wireless site survey to assess sufficient wireless coverage in testing areas. The areas to review in this survey include:

### Device Density

Review the number of devices connecting to a single access point. Devices connecting to the access point might not be in the same room where the testing occurs. If the site has an open network or available guest network, account for devices that students, proctors, and teachers have connected (e.g., smartphones, laptops, and tablets).

### Radio Frequency Interference

Review whether other devices might cause interference. Wireless networks share the same frequency as many technologies and any of these devices operating at the same frequency as an access point can cause interference. In addition, wireless access points sharing the same channel may interfere with each other.

### Connection Consistency

Consider things that may interrupt the connection between the testing device and the access point. Review whether there are objects obstructing the line of sight between testing devices and access points that could interrupt the connection. Also, multiple access points can lead to momentary interruptions as a testing device moves from one point to another.

### 2.4 GHz vs. 5 GHz Bands

Assess whether the site's wireless network is using either the 2.4 GHz or 5 GHz bands appropriately. Wireless networks operate in either 2.4 GHz or 5 GHz band. The 5 GHz connection can transmit higher amounts of data with better speeds. The 2.4 GHz connection is better for transmitting data over longer ranges and through walls and other solid objects.

After this survey, is the site's wireless capacity adequate to support online testing?

## TRAINING

### Students Readiness

- Will students have opportunities to use and become comfortable with the technology? (e.g., testing devices, keyboards, headsets, etc.)
- Will students have sufficient time to view student tutorials and to practice taking the tests through the Online Tools Training (OTTs)/Practice Tests to become familiar with the testing application before they take the test?

### Educators Readiness

- Will educators have time to access training material and to become familiar with the technology being used to deliver online testing by personally accessing Online Tools Trainings (OTTs)/Practice Tests?
- Will educators be able to provide students with sufficient classroom time to watch student tutorials and to access the Online Tools Training (OTTs)/Practice Tests?

### Technology Staff Readiness

- Will technology staff have enough time to understand the technology infrastructure requirements and to understand how to properly install and configure the network environment and COS Service Devices?
- Will technology staff have adequate time to prepare testing devices (e.g., install DRC INSIGHT client, register testing devices)?