



STAAR Online Testing Platform Local Caching Software (LCS) District Guide

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1.0 Local Caching Software

The STAAR Online Testing Platform Secure Browser has caching capabilities that should eliminate the need for local caching software for most districts. However, under extreme circumstances where bandwidth is known to be insufficient or internet connectivity is considered unreliable, a second layer of caching, called Local Caching Software (LCS), may be appropriate. This document outlines a validation process to determine if the LCS will be required.

1.1 Determining the Need for Additional Caching

To determine if the campus or district needs a secondary level of caching and should use LCS, follow the steps below.

Step 1: Perform a “Readiness Check” as described in the STAAR Online Testing Platform Readiness Tool (<https://tx-bandwidth.caltesting.org>).

Did this test indicate you have insufficient bandwidth for the number of testers expected? If you need to support a larger number of testers than your bandwidth will handle, please contact the Texas Assessment Support Center to discuss your LCS needs with our support staff.

Step 2: Determine if the current Internet system is reliable.

Does the campus experience frequent Internet disconnections or slowdowns? Does Internet usage need to be managed carefully to avoid disruption to online activities? If your internet connection provides inconsistent bandwidth or unreliable service, the LCS might be an option. A reliable Internet connection is required from the time a student first logs in to start a test from a workstation. After the test is started, the LCS may provide additional fault tolerance over the existing cache function. If your Internet service is inconsistent, the LCS may be the right solution. Please contact the Texas Assessment Support Center to discuss your LCS needs with our support staff.

1.2 Support Contact Information

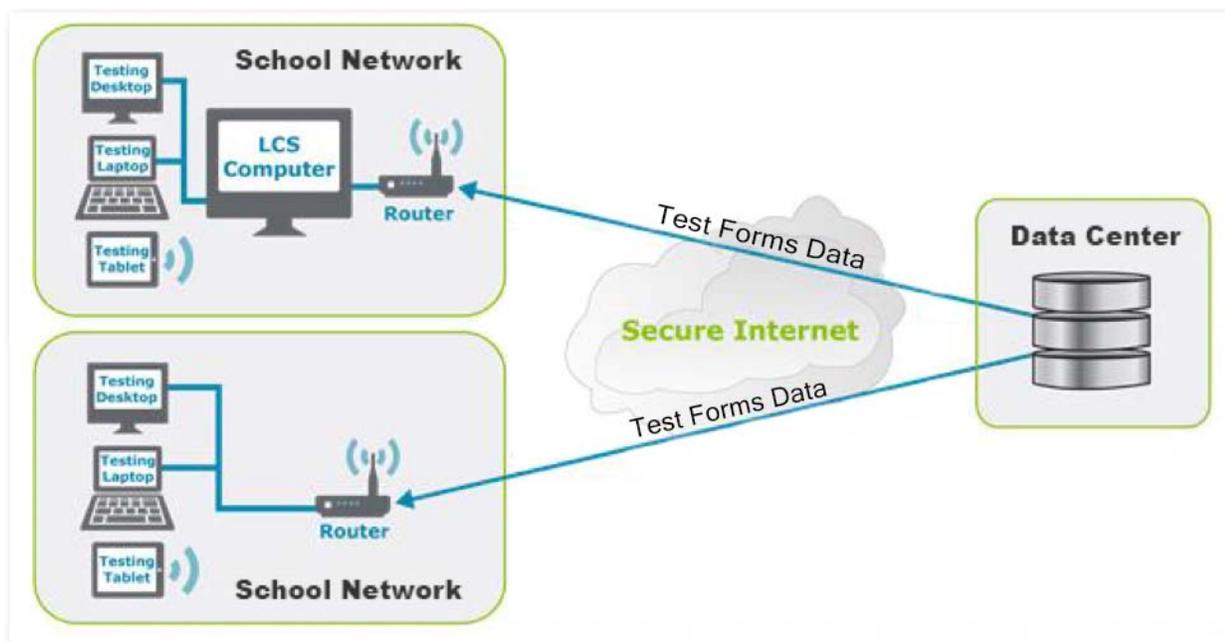
Texas Assessment Support Center

Phone : (855) 333-7770

Email: STAAR3-8@ets.org or STAAREOC@ets.org

2.0 About the LCS

The LCS caches test content from the ETS Data Center then delivers it to local testing devices (see image below). Districts that typically experience issues with bandwidth and connectivity, especially when a large number of students are testing simultaneously, may find that test delivery is best supported when using the LCS. Downloading test data directly from the Internet may over-burden a campus Internet connection. With the LCS, all the tests are cached on a local system and students taking a test download the data from the LCS rather than a remote Internet location.



The image above displays how using the LCS differs from a direct Internet connection to the Data Center.

- Each testing device downloads test data from the LCS.
- Using the LCS reduces the reliance on Internet bandwidth during testing.
- Test content is downloaded automatically to the LCS once the LCS is installed, configured, and registered.
- The LCS caches (stores) student responses but does not retain them once they are delivered to the ETS Data Center.
- The STAAR Online Testing Platform requires an Internet connection whether using the LCS or not.
 - A test cannot be started without Internet connectivity.
 - If the Internet connection goes down during testing and stays down for an extended period, students who had logged in and begun testing are logged out of the test and will be able to log back in to the test once the connection is reestablished.

- Test takers who had logged out while testing prior to the outage will be required to restart any unfinished test.

2.1 Minimum LCS System Requirements

The LCS does require installation and configuration. It does not require commercial server hardware. Any desktop that satisfies the minimum requirements to run the LCS can be used. The LCS must be installed on an extremely reliable and physically secure system since all test data is stored on it.

NOTES:

- Details regarding download, installation, configuration, and registration can be found in the *STAAR Online Testing Platform Technology Guide*. The guide is available on the *Technology Systems and Supports* page at <http://www.texasassessment.com/technology/>.
- For detailed information about hardware and software requirements, refer to the current *Unified Minimum System Requirements for the Administration of Online Assessments* at <http://www.texasassessment.com/technology/>.

2.2 Minimum Internet Connectivity and Security Requirements

Network	All Testing Computers must be connected to the Local Area Network (LAN).
Connection	The LCS requires continuous Internet connectivity.
Power Position	The LCS computer must remain on, and not powered down or put in “sleep” mode during the test administration window.
Connection Protocols	Connections to the Intranet can be made using HTTP and HTTPS protocols.

3.0 Frequently Asked Questions

Noted below are answers to frequently asked questions about the LCS.

Q: What is the LCS?

A: By optimizing the use of available external Internet bandwidth, the LCS system increases the reliability of the testing environment where continuous Internet connectivity is not reliable.

Q: How do we get started?

A: To start using the LCS, it must first be downloaded and installed on a local computer. Each of the testing devices must be configured to point to the local computer where the LCS is installed.

Q: Is the LCS required?

A: No. However, the LCS is recommended for campuses that have bandwidth limitations to provide a better testing experience for their students.

Q: When is the LCS not beneficial for the district?

A: If internet bandwidth and reliability is already sufficient to support student testing needs in your district, the LCS will not be beneficial.

Q: Can I operate the LCS from a virtual server?

A: Yes, a district can operate the LCS from a virtual server, running any standard virtualization software. Any virtual server will be supported.

Q: Is there a maximum number of users that can sign-on to an individual LCS?

A: Yes, the LCS can handle up to 500 users. However, districts should test the number of users that can be supported by administering the online testing tutorials and practice tests and examining the level of the LCS performance.

Q: We will be testing more than 500 students at a time and will need multiple LCS installations. How do we direct a client machine to the right LCS?

A: Configure each client to a separate LCS. For example, if the school district has two LCS installations, half of the testing devices should be configured to one, and the remaining half to the other LCS installation.

Q: If 500 is the maximum number of users that an instance of the LCS can test, is there a maximum number of LCS instances that can be running?

A: An unlimited number of LCS instances may be utilized for testing, constrained only by the network and hardware that the LCS instances are being run on.