

Infrastructure Readiness Checklist 2022–23

Overview

Technology Staff

This checklist will help you prepare for the 2022–23 MCA online test administration. Tasks are listed chronologically. To limit test day technical issues, technology staff should perform the tasks below according to the recommended timelines. As district infrastructure changes, relevant tasks that had been completed before testing should be reassessed to ensure changes did not impact completed readiness efforts.

TestNav is accessed via installable TestNav software. It is available as an app for tablets, Chromebooks, and Windows 10 devices through the Microsoft Store, or as TestNav Desktop, a traditional installation, for desktop and laptop computers. It is downloaded, installed, set up, and verified by technology staff.

Resources referenced in this checklist are available on the PearsonAccess Next website (minnesota.pearsonaccessnext.com):

- The [TestNav 8 Online Support page](#) (PearsonAccess Next > TestNav 8 Online Support (under Quick Links)) includes system requirements, detailed setup instructions for supported devices, infrastructure and network preparation, troubleshooting guidance, App Check and ProctorCache information, and complete error code documentation.
- The [User Guides page](#) (PearsonAccess Next > Resources & Training > User Guides) includes Minnesota-specific system user guides.

Refer to the TestNav 8 Online Support page often for hardware and software requirement updates and technical bulletins, especially the [Recently Updated page](#) to quickly view new updates.

- Updates to hardware requirements will require you to work closely with the District Assessment Coordinator (DAC) to ensure that hardware, such as the type of headphones or keyboards, are available in the format needed on testing day. For example, Bluetooth headphones are not allowed for testing, while wired mice and keyboards are recommended, but not required. Note: There are exceptions for amplification devices, such as personal hearing aids, that use Bluetooth capabilities.
- The System Requirements page is regularly updated under Testing In Progress, as new operating systems are released and internal verification takes place before officially being supported by TestNav. Note: If possible, wait to update devices to a new OS until after they are officially supported by TestNav. Until supported, updated devices may not function properly for testing. **New for 2022–23:** For Chrome OS, Pearson supports both the Google Stable (S) and Google Long Term Support (LTS) channels. The Stable channel receives OS updates regularly to address security fixes and software updates. The LTS channel has a slower release cadence and will only get feature updates every 6 months. Devices using the LTS channel will continue to receive frequent security fixes. Districts using the Google LTS can use the LTS channel for a longer period, reducing the need to take each update available through the Stable channel.

Review the *Assessment Update* sent by the Minnesota Department of Education (MDE) every Wednesday, which includes a Tech Update section for relevant technology information, troubleshooting guidance, and implementation resources. Past [Assessment Update](#) issues are also posted to PearsonAccess Next under MDE updates (PearsonAccess Next > MDE Updates > Assessment Update).

Test Security Reminders

- Annually complete the *Test Security Training* in the [Training Management System](#) before testing, as well as any other trainings required by your district. Contact your DAC with any questions about required and optional trainings.
- Do not use actual student tests to prepare for test administration. Instead, follow the steps in this checklist to ensure your sites are ready for testing.

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- Follow your district’s policies and procedures for providing technology assistance during testing. If you need to report a technical issue within your district or to Pearson, write down any error messages or codes along with the student and testing device information. Do not take a picture of the error message or include any information on the content of the item when you report technical issues.
- Although there may be situations where you have access to test content, such as during a technical issue, you must not copy, share, or reference test content in any way.
- Report any test security violations immediately to your District or School Assessment Coordinator.

District Assessment Coordinators (DACs)

DACs will be the primary recipients of memos that provide information about test administration. It is important for DACs and technology staff to develop a communication plan for sharing this information and for determining how communication with the Pearson help desk will be handled at the district. The Pearson help desk can be reached at 888-817-8659 or you may [submit a Pearson help desk request online](#).

Recommendations for Proctor Cache and Secondary Save Location

MDE and Pearson no longer recommend proctor caching for online MCA testing. If you have used proctor caching in the past, have concerns about testing without proctor cache, or want to discuss testing without proctor cache for Spring 2023, please schedule a Technology Office Hours virtual session to speak with a Pearson Field Engineering Specialist (see below). **New for 2022–23:** Pearson and MDE no longer recommend designating a secondary save location in the TestNav Configuration in PearsonAccess Next. Because TestNav receives each student response, there is no need to designate a secondary save location. All steps for setting up proctor cache and secondary save location are in Appendix A of this guide for reference if your district will continue to use proctor caching and/or use secondary save locations. Information in this checklist reflects preparing for online testing without proctor caching and without the secondary save location.

Technology Office Hours

In addition to the Pearson help desk, you may also utilize Pearson’s [Technology Office Hours](#) and schedule a one-on-one virtual session with a technology field engineer to talk through edge cases, testing without proctor cache, specific setup instructions, or discuss other challenges.

Complete Technology Setup (Required) 2 Months Prior to Testing

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| 1 | <p>DACs must set up any new user accounts for the Technology Staff user role. Users must be created in both PearsonAccess Next (for test administration) and the Training Center (for the Infrastructure Trial) if they need access to both sites. The Training Center should only be used for technology preparation. Note: It is recommended that DACs create, enable, or restore Technology Staff accounts in early fall so technology staff can start test administration preparation.</p> <p>No action is required for technology staff who already have active PearsonAccess Next accounts. Any user accounts that have been disabled due to inactivity must be restored by the DAC. DACs may refer to the PearsonAccess Next User Accounts Guide for additional information on creating or updating user accounts.</p> |
| 2 | <p>Identify student testing devices and administrator/Test Monitor devices used for online testing. Review the PearsonAccess Next System Requirements to ensure optimal performance in preparation for administering assessments in PearsonAccess Next. If proctor caching is determined to be necessary after speaking with Pearson Field Engineering, use Appendix A for all related setup and checklist requirements.</p> |

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3	Verify that student testing devices and administrator/Test Monitor devices comply with hardware/software requirements by reviewing the TestNav System Requirements page .
4	<p>Review the Set Up and Use TestNav page. In the days before testing, confirm that all programs and applications are closed or disabled on the student testing device.</p> <p>Software applications must be closed or disabled on all student testing devices on the days students are to test. Check devices and take an inventory of software applications, including:</p> <ul style="list-style-type: none">• Bluetooth• Cameras (still and video)• Screen capture programs (live and recorded, for example, Skype)• Mirroring software• Email• Instant messaging• Application switching• Media players (for example, iTunes)• Windows Cloud Clipboard• Printing capabilities• Screen share applications• Any other application that will launch automatically and terminate testing. <p>Configure the common applications listed below NOT to launch on any student testing devices during testing sessions:</p> <ul style="list-style-type: none">• Anti-virus software performing automatic updates• Autofill (verify it is not accessible)• Power management software on laptops warning of low battery levels• Screen savers and sleep mode• Email with auto message notification• Calendar applications with notifications (for example, Google Calendar)• Pop-up blockers• Set automatic updates (for example, iTunes) <p>Note: While TestNav will lock down the student testing device and prevent students from accessing other applications while testing, consider creating a generic user profile to be used during testing that locks the user from opening applications other than TestNav. This prevents other applications (for example, YouTube) from running in the background while the student is testing.</p>

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5	<p>Install the TestNav app and follow the specific setup steps for each type of device that you will use. Detailed setup steps for all supported devices and configurations can be found on the Set up and Use TestNav page. If the TestNav application was previously installed on a testing device, you may need to take steps to update before following device specific setup instructions.</p> <ul style="list-style-type: none">• Chrome, iOS, and Windows Store apps (Windows 10 only) will update automatically to the latest version if automatic updating is enabled on the device. No further action is required.• Desktop apps will need to be downloaded and re-installed. You will uninstall the TestNav application using your device’s uninstall process, and download and install the updated version of the TestNav application for your device.
6	<p>Configure all infrastructure services, network devices, and applications that may reject, redirect, reroute, delay or modify network traffic packets between the student test device and Pearson servers. If proctor caching, configure infrastructure services between the ProctorCache machine and Pearson servers. This includes but is not limited to: firewall/content filters, anti-virus, IPS/IDS, network and device security, address translation services, packet inspection, load balancing, and global caching services.</p> <p>Note: Firewall/content filters are a leading cause of testing disruptions. At a minimum, your testing configuration should allow traffic from the following list of URLs and allow browser popups for Pearson sites, including PearsonAccess Next.</p> <ul style="list-style-type: none">• *.testnav.com:80• *.testnav.com:443• *.pearsonestcontent.com:80• *.pearsonestcontent.com:443• *.thawte.com• *.usertrust.com• *.comodoca.com• TCP ports 4480 and 4481 on any ProctorCache machine (for communication between TestNav and the ProctorCache machine)• Google-analytics.com (optional)• Set browsers to allow pop-ups from pearsonaccessnext.com• Allow read and write access to Saved Response File (SRF) locations <p>Note: Additional guidelines for configuring proxy servers, firewalls, content filters, and anti-virus software can be found on the Network Requirements and Guidelines page (TestNav 8 Online Support > Network Requirements and Guide). For questions or concerns, contact your vendor, as they will be able to assist you in configuring specific system.</p>
7	<p>TestNav Configurations and Secondary Save Locations</p> <p>If you are not proctor caching or creating a secondary save location, there is no need to create a <i>new</i> TestNav Configuration; skip to step 8. Refer to Appendix A for steps on creating a new TestNav Configuration with a precaching computer and secondary save location if your district will still use these features.</p> <p>However, if you have <i>existing</i> TestNav Configurations and are not planning to proctor cache, refer to the instructions for Edit TestNav Configurations in this step.</p> <p>New for 2022–23: Adding a secondary save location within the TestNav Configuration is no longer recommended as it offers limited benefits in preventing loss of student responses. When a student starts their test, TestNav sends a bundle of three items to the student testing device. Each</p>

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student response is sent back to TestNav. TestNav then sends one item each time. If a student is exited from their test due to a technological issue (for example, loss of internet connection), the maximum number of impacted student responses is one.

Overview

Create or edit TestNav configurations in the Training Center before you create any test sessions. TestNav configurations allow you to setup a proctor caching computer and customize secondary response backup file locations. TestNav Configurations are not tied to a specific test administration (for example, MCA 2023) and carry over each year. Existing TestNav configurations should be reviewed annually prior to creating test sessions.

- For new organizations, determine if a TestNav Configuration is needed after reviewing the information in this step.
 - If no, skip to Step 8.
 - If yes
 - To create a new TestNav Configuration, refer to Appendix A. Note: Only create a new configuration if you plan to proctor cache content or create a secondary save location. Consult with your district technology staff and Pearson Engineering to see if these are necessary for testing.
 - To edit an existing configuration, refer to the tasks below. Note: This step outlines tasks to update configurations without proctor caching or using a secondary save location. Refer to Appendix for updating a configuration to use these features.

Tip: To see a list of organizations with or without TestNav Configurations, view the *Organizations that have Precaching Server Configuration* operational report in PearsonAccess Next. From the PearsonAccess Next Home page, under **Reports**, select **Operational Reports**. Select the checkbox next to the **Online Testing** report category and then select **Organizations that have Precaching Server Configurations**. To view a previously downloaded report, select **Download Report**. To run a new report, select **Request Report Refresh**. Under **Filter Options**, select the *Organizations with Precaching Server Configuration* or *Organizations without Precaching Server Configurations*.

Edit TestNav Configurations

If a district or school has an existing TestNav Configuration with a listed precaching computer, but you are not planning to proctor cache, update the existing TestNav configuration to include an empty Precaching Computer. Leave the IP Address and Port fields blank in the new Precaching Computer and select the checkbox next to “Default computer used for sessions” When creating test sessions for the Infrastructure Readiness Check, the empty Precaching Computer will be selected by default. This is a required field if you have created a TestNav Configuration, even if you are not proctor caching. See steps below for information on creating an empty Precaching Computer. If during the Infrastructure Readiness Check you run into issues, contact the Pearson help desk, as the issue may be unrelated to proctor caching.

To edit an existing TestNav configuration (that is, adding an empty precaching computer if not proctor caching, changing the default precaching computer, creating a customized response backup file locations, etc.), sign in to the [Training Center](#) (PearsonAccess Next > Technology > PearsonAccess Next Training Center > Sign In to the Training Center). Use the filters on the left to find existing configurations, or select the dropdown arrow right of the Search box to show all results. Select the checkbox next to the configuration name you want to edit.

Select the dropdown menu to the right of the **Start** button and select **Create / Edit TestNav Configurations**.

- Select **Add** next to Precaching Computer. A second precaching computer can be added if you want keep an existing precaching computer and create an empty precaching computer as part of the same configuration.
 - Enter “NoCache” or “None” in the **Computer Name** field.

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- Select the checkbox next to “Default computer used for sessions” to make this your default precaching computer. This computer will automatically be selected as the **Precaching Computer** when creating a test session.
- Leave the **Address** and **Port** fields blanks.
- If not precaching content, select the checkbox next to “Default computer used for sessions” to make the “NoCache” or “None” computer the default computer when creating test sessions.
- Select **Delete** to remove an existing precaching computer, if needed.
- Edit information under Response File Backup Locations as needed.
- Select **Save**.

Tip: [Import or Export TestNav Configurations](#). TestNav configurations created in the Training Center can be imported to PearsonAccess Next. For the steps to import/export TestNav configurations, see step 16.

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Run App Check, as applicable, on every testing device in your testing environment.

Running App Check ensures that TestNav is properly installed, the device is able to enter Kiosk mode, and verifies connectivity to Pearson servers.

If you created a TestNav Configuration with a precaching computer and secondary save location, the associated TestNav Configuration Identifier (ID) can be entered for App Check to evaluate the testing device's connection to a proctor cache computer and custom secondary student response save locations. If entering a TestNav Configuration Identifier, the ID can be found in PearsonAccess Next by going to: Setup > TestNav Configurations.

- Locate and select the TestNav configuration applicable to your district/school.
- Select the Create / Edit TestNav Configurations option in the Start dropdown. The Identifier is located beneath the IP address and port fields for your ProctorCache computer. Note: If you do not have a ProctorCache computer, these fields will be blank.

Next, review information on the [Set up and Use TestNav page](#).

- Select the applicable device. Note: If possible, run app check on each testing device, as app check provides feedback for that individual device. If it is not possible to run app check on all testing devices, run app check on a sampling of devices that will be used during testing.
- Review the Run App Check section.

Run the App Check (TestNav 8 App > User dropdown menu > App Check > Run App Check).

- App Check verifies that the test device can contact the TestNav servers and that the app can run in a secure kiosk mode.
- Running App Check with the optional Configuration Identifier will also verify connectivity to the installed and configured ProctorCache machine.
- App Check includes a download check when launched and will report if the download of preselected sampled content fails. This could be caused by content filtering with custom rules in place to block certain audio, video, etc. files.

Run the Network Check (TestNav 8 App > User dropdown menu > App Check > Network Check).

- Enter the number of devices you anticipate being active during peak testing to see whether there is sufficient flow between the local network and Pearson servers to conduct online testing. Note: Run the network check during the school day when students are scheduled to test to get a realistic picture of bandwidth load.
- Under **Network Diagnostics** the download speed test displays and provides a **pass** or **warning** rating.
- Here's what you'll see: a note indicating whether or not proctor caching is recommended based on the results of the network diagnostics test. This information provides an opportunity to evaluate whether the number of concurrent testers would cause issues with your technology setup and, if so, fine tune the testing numbers for your network.

To support the increased reliance on wireless networks, refer to the [Network Requirements and Guidelines page](#), which provides wireless network best practices and troubleshooting tips.

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Conduct an Infrastructure Trial (Recommended)

1–2 Months Prior to Testing

The Infrastructure Trial is conducted using the PearsonAccess Next Training Center.

An Infrastructure Trial is an opportunity for districts to prepare for test administration by simulating test-day network utilization. This will help determine if there are any infrastructure issues to resolve and confirm all testing devices are properly configured and ready to run the MCAs. Below are some issues that could be uncovered or else properly verified through running an Infrastructure Trial:

- Testing devices without the latest TestNav version
- TestNav configured and runs correctly on testing devices
- Previously configured testing devices that were reimaged or do not meet current system requirements
- Issues with a device accessing content through local ports or content being filtered
- Background applications on testing devices that may interfere during the test administration
- Network load
- Overloaded Wi-Fi access points
- Issues with response save locations

The Infrastructure Trial is also an opportunity for Technology Staff to familiarize themselves with PearsonAccess Next and provides general troubleshooting experience.

Confirm the testing dates scheduled with your DAC in order to complete the Infrastructure Trial prior to the test administration. You should plan to conduct an Infrastructure Trial only after you have completed the previous steps.

Technology staff should plan approximately **30 minutes** to administer the Infrastructure Trial (times may vary depending on infrastructure complexities, issues encountered, and troubleshooting required). For the purpose of conducting the Infrastructure Trial, you will use sample students and forms in the PearsonAccess Next Training Center. District staff must use the sample student testing tickets to run the Infrastructure Trial. There is only one form available: Infrastructure Readiness Check. This form contains large item types (to replicate the bandwidth of Science MCA) in an adaptive form (to simulate Reading and Mathematics MCAs) to simultaneously test a district's or school's connectivity to Pearson's servers and bandwidth to download large items.

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Create Infrastructure Trial test sessions in the Training Center.

- Sign in to the [Training Center](#) (PearsonAccess Next > Technology > PearsonAccess Next Training Center > Sign In to the Training Center) to set up and complete the Infrastructure Trial.
- From **Testing > Sessions**, select the dropdown menu to the right of the **Start** button and select **Create / Edit Sessions**.
- On the New Session screen, enter the required information as indicated by the asterisks. For Test Assigned, select **Infrastructure Readiness Check**. The Form Group Type will default to Main. Scheduled Start Date and Time are for planning purposes only. The test session will start whenever the Start Session button is selected, regardless of the date entered here. If at least one proctor caching computer is configured, select the "NoCache" or "None" configuration set up in step 7. If proctor caching is determined to be necessary after speaking with Pearson Field Engineering, use Appendix A for all related setup and checklist requirements.
- Select **Create**.

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10	<p>Add sample students to the test session.</p> <ol style="list-style-type: none">1. From Testing > Students in Sessions, in the Session List, select Add a Session. In the Session Name field, begin entering the name of the Bandwidth test session. Select the checkbox next to the test session and select Add Selected.2. Select the dropdown menu to the right of the Start button and select Students.3. On the Add Student to Sessions page, under the Session dropdown, select the test session name. Under Find available students, select the dropdown next to Search and select Show all results.4. Select students, up to 25 at a time, with the name "Student, A" (indicating accommodated text-to-speech) selecting the checkbox next to each student name or selecting the checkbox in the top left corner, next to the Student column header, to select all the students displaying on the page. If selecting the checkbox in the top left corner, verify that all students selected have the name "Student, A."5. Select Add. Repeat steps to add additional students as needed. The number of sample students added to the test session should be based on the maximum number of testing devices that will be used concurrently during testing.6. To return to the Students in Sessions screen, in the top right, select Exit Tasks.
11	<p>Print student testing tickets for sample students in the Training Center.</p> <ol style="list-style-type: none">1. Technology staff provide Infrastructure Trial student testing tickets to the appropriate staff who will be signing in as the sample students and direct them to their assigned computer lab or other testing location. From Testing > Students in Sessions, add the test sessions to the Session List. One test session will automatically be selected in the Session List.2. Select Testing Tickets and Session Resources. Under Student Testing Tickets, select Print all for this session. When the tickets open, they will be formatted as one per page. To change how the tickets are printed, select a print option from the dropdown menu.3. Use your browser's print function to print the testing tickets.
12	<p>Prepare and start the test session in the Training Center.</p> <p>The session must be prepared and started by the technology staff before staff are able to sign in as sample students to the Infrastructure Trial.</p> <ol style="list-style-type: none">1. From Testing > Students in Sessions, add both test sessions to the Session List.2. From the top of Session List, select Combined View.3. Select Prepare All Sessions. Once the test sessions have been prepared, Prepare Session will change to Start Session.4. Select Start All Sessions. Once the test session has been started, Start Session will change to Stop Session and a lock/unlock slider will be displayed. Tests are automatically unlocked when the test session is started.
13	<p>Launch TestNav on all testing devices used in the Infrastructure Trial.</p> <ol style="list-style-type: none">1. Select the TestNav icon on the Home screen (for tablets); select TestNav from the Apps menu (for Chromebooks); or select the TestNav icon on the desktop screen (for desktops and laptops).2. Using the Infrastructure Trial student testing tickets, staff sign in on each device that will be used for the Infrastructure Trial. <p>Tip: Run the Infrastructure Readiness Check during the time scheduled for spring test administration. For example, if testing between 9:00–11:00 a.m. and 1:00–3:00 p.m., schedule the Infrastructure Readiness Check during these times to simulate network load experience.</p>

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14	<p>Monitor network performance for slowdowns or ISP bandwidth usage. Make note of any application, software, or service which causes TestNav to exit kiosk mode. Additionally, identify test devices and workstations that experience long load times, have difficulty displaying or interacting with test items, or that experience degraded performance. If using a wireless connection, monitor the connections and verify that access point placement is sufficient for testing. Identify access points which are underperforming, overloaded, or transmitting at a slower rate or unexpected network standard.</p>
15	<p>If needed, contact the Pearson help desk at 888-817-8659 or submit a Pearson help desk request with feedback and/or concerns regarding software or hardware issues that occurred during the Infrastructure Trial. You may also utilize Pearson's Technology Office Hours and schedule a one-on-one virtual meeting with a technology field engineer to talk through edge cases, specific setup instructions, or discuss other challenges.</p> <p>Communicate the results of the infrastructure trial to the DAC in order to keep the DAC in the loop on technology readiness.</p>
<p>Final Preparation for Test Administration (Required) 2 Weeks Prior to Testing</p>	
16	<p>Import TestNav configurations created in the Training Center to PearsonAccess Next.</p> <p>To import or export TestNav Configurations, follow these steps:</p> <ol style="list-style-type: none"> 1. From Setup > TestNav Configurations, search to find configuration(s), or click the down arrow next to the Search button and select Show all results. Select the configuration(s) you want to edit. 2. Click the Select Tasks drop-down and select Import / Export TestNav Configurations. Click Start. 3. Click the Action drop-down and select Import or Export. 4. Click Import or Export, as appropriate. <p>Note: To avoid a possible timeout, Pearson recommends that you do not import / export over 300 TestNav Configurations at a time.</p> <p>Tip: To see a list of organizations with or without precaching configurations (MCA only), view the <i>Organizations that have Precaching Server Configuration</i> operational report in PearsonAccess Next. See the Access Operational Reports section in this guide for details on how to access the reports. See Step 7 for additional details.</p> <p>Note: If you did not update TestNav configurations in the training center, review Step 7 and update the configuration in PearsonAccess Next, as needed.</p>
17	<p>Run App Check on all computers and devices that will be used for test administration to verify that no changes have been made to infrastructure. If unable to run App Check on all testing devices, run App Check on a sampling of devices that will be used during testing.</p>

