Infrastructure Readiness Checklist 2018–19

Overview

Technology Staff

This checklist will help you prepare for the 2018–19 MCA 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 that the change did not impact completed readiness efforts.

TestNav is accessed via Installable TestNav**.** It is available as an app for tablets and Chromebooks, and as TestNav Desktop, an application 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:

- 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 and quick guides.

Refer to the TestNav 8 Online Support page often for hardware and software requirements updates and technical bulletins, especially the Recently Updated page to quickly view new updates. 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.

Test Security Reminders

- Annually complete the *Test Security Training* and *Assurance of Test Security and Non-Disclosure* before testing, as well as any other trainings required by your district. Note that the *Assurance of Test Security and Non-Disclosure* is embedded in the *Test Security Training*.
- 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.
- 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 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 breaches immediately to your District or School Assessment Coordinator.

District Assessment Coordinators (DACs)

District Assessment Coordinators (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.

New Recommendations for Proctor Cache

Pearson has updated Proctor Cache recommendations for the 2018–19 school year. Because of the increased bandwidth now available in schools throughout Minnesota, proctor caching is no longer recommended for Reading and Mathematics MCA tests, which due to their adaptive nature, require continual communication with Pearson servers. Proctor Cache is also no longer recommended for any Data Entry tests. However, Pearson is still recommending proctor cache for the Science MCA and Science Script MCA tests since they are not adaptive and are large in size due to simulations and animations.

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	Complete Technology Setup (Required) 2 Months Prior to Testing
1	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 to have access to both sites. The Training Center is only intended to be used for technology preparation. No action is required for technology staff who already have PearsonAccess Next accounts. Any users who no longer need an account or who are no longer at the district should be deleted. Refer to the *PearsonAccess Next User Accounts Guide* for additional information on creating or updating user accounts.
2	Identify testing labs/administrator devices and review the PearsonAccess Next System Requirements in order to ensure optimal performance to prepare for and administer assessments in PearsonAccess Next.
3	Verify that student testing devices and designated ProctorCache machines comply with hardware/software requirements by reviewing the TestNav System Requirements page and ProctorCache System Requirements page.
4	Review the Set Up and Use TestNav page. Check devices and take an inventory of software applications, including cameras (still and video), screen capture programs (live and recorded, e.g., Skype), email, instant messaging, application switching, media players (e.g., iTunes), Windows Cloud Clipboard, printing capabilities, or any other application that will launch automatically and terminate testing. These software applications need to be closed or disabled on all student testing devices on the days students are to test. Prior to student 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 (i.e. YouTube) from running in the background while the student takes the test. Configure the common applications listed below NOT to launch on any student testing devices during testing sessions: • Anti-virus software performing automatic updates • Verify autofill 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 (e.g., Google Calendar) • Pop-up blockers • Set automatic updates (e.g., iTunes)
5	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 the test device, you may need to take steps to update before following device specific setup instructions. • Android, Chrome, and Windows Store apps will update automatically to the latest version if automatic updating is enabled on the device, and no further action is required. • For iOS and desktop versions, 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	Configure all infrastructure services, network devices, and applications that may reject, redirect, reroute, delay or modify network traffic packets between the student test device, ProctorCache machine, and Pearson servers. This includes but is not limited to: firewall/content filters, IPS/IDS, network and device security, address translation services, packet inspection, load balancing, and global caching services. At a minimum, your testing configuration should whitelist all traffic from the following list of URLs and allow browser popups for Pearson sites, including PearsonAccess Next.
	*.testnav.com:80 *.testnav.com:443 *.pearsontestcontent.com *.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 - Allow read and write access to Saved Response File (SRF) locations

| 7 | Download and install ProctorCache or update proctor caching. ProctorCache is still recommended for Science MCA and Science MCA Script tests, which are large linear tests with, simulations and animations. ProctorCache is a software program that enables districts to download encrypted test content to a local computer, which reduces the amount of bandwidth required for electronic testing. A district downloads the content once for each test administration.

Note: ProctorCache is no longer required for Reading and Mathematics MCA tests, which due to their adaptive nature, require continual communication with Pearson servers. Most school districts have ample network capacity to support adaptive testing without the need for local content caching

Set Up and Use ProctorCache (Recommended for Science MCA only).
To update ProctorCache to the latest version, you should first purge all test content from prior test administrations using your current installation of ProctorCache. Content downloaded from the previous test year is no longer accessible to district staff and students and should be purged.
In your browser, type http://< ProctorCache IP address>:4480 and select **Enter** to view the proctor caching interface.
Select the **Tests** tab. Select the test content to purge by selecting the checkbox next to individual tests or the checkbox at the top of the row to select all tests.
Once the test content is selected, select **Purge** and enter the password. ProctorCache requires a password to refresh, reload, or purge content. The default password is t35t1n6; however, it is strongly recommended that you create a custom password set locally. You can change the default password at any time. For instructions on changing the password, select the Change Password hyperlink on the Set Up and Use ProctorCache page. Confirm password protocol with technology staff before setting up or changing the password.
Next, uninstall the previous version of ProctorCache using the software removal process for your operating system.
Finally, reboot the computer.
Install the latest version. Ensure that you have the latest version of the ProctorCache application by viewing the page. If you are not a network administrator, ProctorCache requires full local administrator permissions and a working knowledge of your network.
Note: Installing ProctorCache DOES NOT automatically cache test content. ProctorCache may be installed at any time before caching test content, and it is recommended to be installed prior to creating test sessions for test administration. For the steps to precache test content, see step 14 for the Infrastructure Trial and step 22 for test administration,

Beginning this year, only PCs can be used as proctor caching machines. Although Macs, tablets and Chromebooks can be used for student testing, they cannot be used as proctor caching machines. ProctorCache can only be installed on devices running the Windows operating system. For more information, refer to ProctorCache System Requirements. |

8	Configure TestNav for Proctor Caching. Note: Some steps will be required for all tests, even those that will not be proctor cached.
	Enter TestNav configurations in the Training Center before you create any test sessions. Later, while you are creating your test sessions, you will select the named configuration that you create here to be used for each test session.
	1. Sign in to the Training Center (PearsonAccess Next > Technology > PearsonAccess Next Training Center > Sign In to the Training Center).
	2. From **Setup** > **TestNav Configurations**, select the dropdown menu to the right of the **Start** button and select **Create / Edit TestNav Configurations**.
	3. For Proctor Cached tests (Science MCA and Science Script MCA)
	a. Enter the details of any proctor caching computers that you will use to precache tests. Create a clear, identifiable name for the proctor caching computer so that users can easily identify the precaching computer they should use when creating a test session.
	b. Note: Precaching Computer Override is selected by default. If ProctorCache is not available, TestNav will download test items directly from the Pearson server to continue testing without interruption. If this option is not selected, it may lead to an interruption in testing if ProctorCache cannot connect when you start or resume a test. It is recommended to leave this option selected.
	4. For non-Proctor Cached tests (Reading and Mathematics MCA and all Data Entry)
	a. Add a placeholder computer name to the TestNav Configuration because users are still required to select a Precaching Computer when creating a test session even if not proctor caching a test.
	b. Enter "NoCache" or "None" in the **Computer Name** field so that users can easily identify this as the placeholder computer name.
	c. Leave the **IP Address** and **Port** fields blank.
	d. When creating Test Sessions for Reading or Mathematics MCA, instruct users to select "NoCache" or "None" as the **Precaching Computer**.
	5. Select **Create**.
	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 21.
9	Ensure proctor caching software is running.
	In your browser, enter http://< ProctorCache IP address>:4480 and select **Enter** to view the ProctorCache interface.
	• If you are visiting the interface from an IP address, you will see two tabs. The **Tests** tab provides information about test content and caching status. Select the **Clients** tab to monitor client connectivity.
	• If you are visiting the ProctorCache interface from a localhost address (http://localhost:4480) you will see an additional **Settings** tab. This tab allows you to change the default ProctorCache password.

10	Run App Check, as applicable, on every testing device in your testing environment.
	In order to run App Check with proctor cache configurations, a Configuration Identifier must be copied from PearsonAccess Next and added to App Check. The Configuration Identifier 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.
	Next, on the Set up and Use TestNav page:
	- Select the applicable device. - View the Run App Check section. - Run the App Check (TestNav 8 App > User dropdown menu > 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, but it does not provide bandwidth speed tests. - Running App Check with the optional Configuration Identifier will verify connectivity to the installed and configured ProctorCache machine.
	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.
11	Configure Response File Backup Locations. It is strongly recommended that you add a secondary save location to provide an additional failsafe for preventing loss of student responses.
	- You have the ability to designate primary and secondary SRF locations for each type of test device. - Windows and Mac devices can take advantage of local, network, and SFTP SRF save locations. - ChromeOS and iOS devices use a local Primary SRF location. Secondary SRF locations for these device types must be SFTP.
	If you set a non-SFTP address as a secondary save location, TestNav saves backup SRFs for ONLY those students testing on TestNav Desktop; SRFs would not be saved for Chromebooks and tablets. ChromeOS and iOS devices require that the secondary save location is a SFTP. If a secondary location of a type other than SFTP is listed for these devices, the secondary location will not be used and TestNav will only create SRF files in the primary save location on those devices.
	For instructions on setting up response file backups, see the Configure Response File Backup Locations page (PearsonAccess Next Online User Guide > Manage Online Tests > Configure Response File Backup Locations). For more information about primary and secondary save locations, refer to the Installable TestNav section on the Set up and User TestNav page (TestNav 8 Online Support > Set Up and Use TestNav > Installable TestNav).

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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. 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 **60 minutes** to administer the Infrastructure Trial (times may vary depending on infrastructure complexities). For the purpose of conducting the Infrastructure Trial, you will use sample students and forms in the PearsonAccess Next Training Center. Beginning, this year, there are two forms available: Bandwidth Check and Connectivity Check. These two checks have been added to account for both types of MCAs (Bandwidth: linear (science), Connectivity: adaptive (reading and mathematics)) because TestNav communication differs slightly between the two different types of tests.

Note: The Bandwidth Check and Connectivity Check can be administered simultaneously or separately. These checks should be administered in a way that replicates the anticipated test administration in your district (i.e., if the adaptive tests (Reading and/or Mathematics MCA) are administered at the same time as the linear test (Science MCA), consider running the checks simultaneously).

12	Create Infrastructure Trial test sessions in the Training Center:

1. 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.
2. Verify that the 2018-2019 Infrastructure Trial test administration is selected. To change the test administration, select the current test administration in the black bar at the top of the page, select the 2018–2019 dropdown, and then select **Infrastructure Trial**.
3. From **Testing** > **Sessions**, select the dropdown menu to the right of the **Start** button and select **Create / Edit Sessions**.
4. On the New Session screen, enter the required information as indicated by the asterisks. For Test Assigned, select **Bandwidth 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, you must select a proctor caching computer.
5. Select **Create**.
6. Create another test session by repeating steps 4 and 5, but for the Test Assigned, select **Connectivity Check**.

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13	Add sample students to the two Infrastructure Trial test sessions: 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**. 7. Repeat steps 1–5 for the Connectivity test session.
14	If using ProctorCache, precache Infrastructure Trial content for the Bandwidth Check (not required for Connectivity Check). From **Setup** > **Precache By Test**, select the boxes next to Bandwidth Check. 1. Select one precache server from the list. 2. Select **Precache**. 3. Verify that content has successfully cached by visiting the ProctorCache diagnostics page and verifying that all cached content has green OK status indicators.
15	Print Infrastructure Trial student testing tickets for sample students in the Training Center. 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. 4. Select the other test session and repeat steps 2 and 3.
16	Prepare and start the Infrastructure Trial test sessions in the Training Center. The session must be prepared and started by the technology staff before technology staff are able to sign in as sample students to the Infrastructure Trial. 1. From **Testing** > **Students in Sessions**, add both of the 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.

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17	Launch TestNav on all student testing machines participating in the Infrastructure Trial. • 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). • Using the Infrastructure Trial student testing tickets for the Bandwidth Check test session, technology staff sign in to the Bandwidth Check on each of the machines that will be used for the Infrastructure Trial. If running these checks simultaneously, ensure technology staff also sign in to the Connectivity Check on other machines. To ensure schools have sufficient bandwidth, technology staff will need to launch the Bandwidth Check (and Connectivity Check, if running simultaneously) on all student testing machines participating in the Infrastructure Trial. Users do not have to navigate through the entire form to complete the simulation of the network load. Simultaneously loading these tests will simulate the network load experience of test administration.
18	Monitor network performance for slowdowns or ISP bandwidth usage. If using a wireless connection, monitor the connections and verify access point placement is sufficient for testing. 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. Note: If your district uses a mirroring software, remember to turn off/disable it before test administration.
19	If running these checks separately, repeat steps 17-18 using the student testing tickets for the Connectivity Check to ensure schools have the necessary connectivity to simulate the adaptive testing experience. Users do not have to navigate through the entire form to complete the simulation of the network load. Simultaneously loading these tests will simulate the network load experience of test administration.
20	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. Communicate the results of the infrastructure trial to the DAC in order to keep the DAC in the loop on technology readiness.

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	Final Preparation for Test Administration (Required) **2 Weeks Prior to Testing**
21	Import TestNav configurations created in the Training Center to PearsonAccess Next. To import or export TestNav Configurations, follow these steps: 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 configurations(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. Note: To avoid a possible timeout, Pearson recommends that you do not import / export over 300 TestNav Configurations at a time.

22	For Science MCA, precache by test. Precaching by test is recommended for Science MCA and Science Script MCA because it downloads all forms and content for the selected test.
	
	1. From **Setup** > **Precache By Test**, mark the boxes to select one or more tests from the list.
	   a. Grade 05 Science MCA
	   b. Grade 05 Science MCA Script
	   c. Grade 08 Science MCA
	   d. Grade 08 Science MCA Script
	   e. High School Science MCA
	   f. High School Science MCA Script
	
	Note: Tests for all grades and subjects will appear on the list. ProctorCaching is only recommended for Science MCA and Science MCA Script tests. ProctorCaching is not required for Reading or Math MCA or any Data Entry tests.
	
	2. Select one precache server from the list.
	3. Select **Precache**.
	
	Note: Precaching by test may be completed before or after test sessions are created. Test content may be cached starting two weeks before testing and throughout the testing window. Tests only need to be cached one time. Once cached, you do not need to re-cache unless tests were deleted from your proctor cache machine, or advised by Pearson.

23	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.

	Test Administration
24	Monitor network performance for slowdowns and ISP bandwidth usage.
25	[Find SRF and Log Files.](#) Retrieve SRFs as needed.