

# **Technical Guide for Online Testing**

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# Overview of the ACT Online Administration

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This guide will help technical staff configure an organization's systems for the ACT test taken online.

## Frequently Used Links

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**Table 1: Frequently Used Links**

Site	URL
TestNav Online Support	<a href="https://support.assessment.pearson.com/display/TN/TestNav+8+Online+Support">https://support.assessment.pearson.com/display/TN/TestNav+8+Online+Support</a>
PearsonAccess <sup>next</sup>	<a href="https://testadmin.act.org">https://testadmin.act.org</a>
PearsonAccess <sup>next</sup> Mock Administration (training site)	<a href="https://training.testadmin.act.org">https://training.testadmin.act.org</a>
Download TestNav, ProctorCache Software	<a href="http://download.testnav.com">http://download.testnav.com</a>

## Systems for Online Testing

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PearsonAccess<sup>next</sup> is the web application used by test staff (i.e., test coordinators, room supervisors) to manage online testing and start and monitor tests. It is located at <https://testadmin.act.org>.

TestNav is the test delivery engine used by examinees to take the tests. It can be downloaded at [https://download.testnav.com](http://download.testnav.com).

## Equipment at Your Organization

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The technical coordinator needs to know the following information about the organization's equipment to ensure it meets hardware, software, and other technical requirements defined by ACT.

**Table 2: Information about Equipment at Your Organization**

Category	Information You Need to Know
Internet Connection	<ul style="list-style-type: none"> <li>Type of internet connection at your organization</li> <li>Internet bandwidth/speed</li> </ul>
Devices	<ul style="list-style-type: none"> <li>Number of devices available for examinees to use</li> <li>Number of devices available for administrative access</li> <li>Types of devices</li> <li>Device owner(s)/administrator(s)</li> </ul>
Operating System, Processor, Memory	<ul style="list-style-type: none"> <li>Operating system for each device</li> <li>Processor for each device</li> <li>Memory for each device</li> </ul>

Category	Information You Need to Know
Monitors	<ul style="list-style-type: none"> <li>• Screen resolution for each device</li> <li>• Display size for each device</li> </ul>

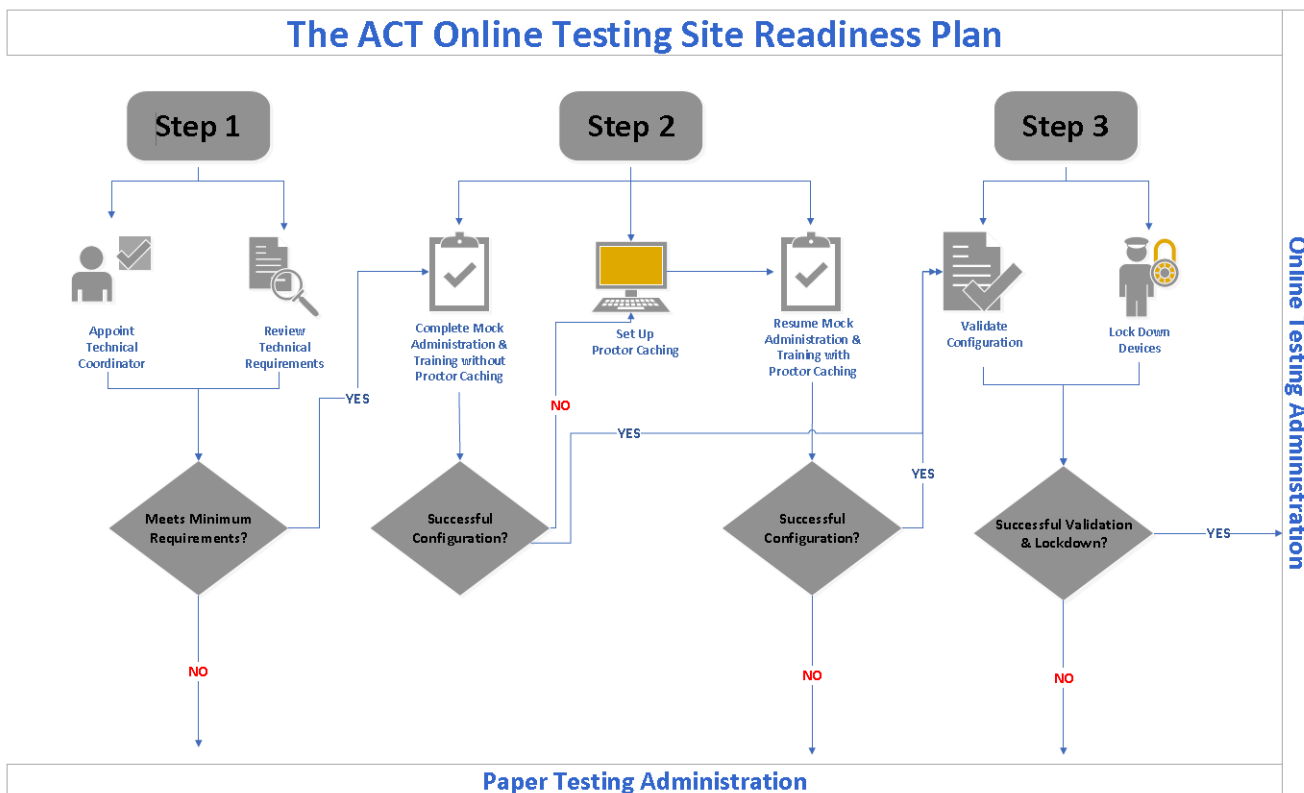
**Note:** Browser-based testing is not supported.

## Site Readiness Steps

The test coordinator and technical coordinator need to complete these steps to administer the ACT online.

- **Step 1**
  - The test coordinator appoints a technical coordinator.
  - The technical coordinator reviews technical requirements.
- **Step 2**
  - The test coordinator completes a mock administration and training without proctor caching (if the site meets minimum requirements).
    - If the mock administration is successful, move to Step 3.
    - If it is not successful, the technical coordinator sets up proctor caching, and the test coordinator resumes the mock administration and training.
- **Step 3**
  - The technical coordinator validates configuration and locks down devices.

**Note:** If at any point the technical coordinator doubts that online testing can be accomplished, the technical coordinator should advise the test coordinator to switch to the paper administration.



## Technical Coordinator Role

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The technical coordinator installs and configures testing system software, and helps the test coordinator set up computers for testing. The person in this role must be available on test day to assist and troubleshoot any technical issues that may arise.

**Number required:** One per test site

## Technical Coordinator Responsibilities

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- Ensure the school's computers and infrastructure meet online testing requirements
- Help the test coordinator and other staff set up for test day (includes examinee and administrative computers and test rooms)
- Troubleshoot technical issues staff or examinees may have on test day
- Rerun applicable system checks the week before test day on all applicable computers (if the test environment is "unfrozen" for an update)

Additional responsibilities, if proctor caching:

- Install ProctorCache software on the proctor caching computer
- Create the TestNav configuration in PearsonAccess<sup>next</sup>
- Precache test content **two days** prior to testing
- After all examinees have completed testing, purge all content from the proctor caching computer

## Administrative Computer in Each Room

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Each test room must have a computer that the room supervisor will use to access PearsonAccess<sup>next</sup> to unlock, start, monitor, manage, and stop test sessions for the room. This computer must meet the requirements listed at <https://support.assessment.pearson.com/display/PAsup/System+Requirements> and reside in an area where the room supervisor can see all examinees in the room.

## Preparing Devices to Ensure Test Content Security

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### Preparing Administrative Computers

Turn off or disable any management software that would allow secure test content on examinee testing devices to be viewed on any other device (i.e., LanSchool, NetopVision, Hapara, or similar applications).

### Preparing Examinee Computers

All software applications, Internet browsers, cameras (still and video), screen capture programs (live and recorded, such as Skype), email, instant messaging, application switching, media players (such as iTunes), and printing capability must be closed before testing begins.

## Disabling Automatic Application Launching

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TestNav must be the only application running on examinees' computers during testing. If an application launches during a test session, TestNav will exit the examinee from TestNav. Before testing, configure any applications that may automatically launch to **disable automatic launch**.

Common automatic launches to disable:

- Anti-virus software performs automatic updates

- Power management software on laptops warns of low battery power
- Screen savers activate
- The computer goes into sleep mode
- Email notifications appear
- Calendar notifications appear
- Sticky keys are active (i.e., the shift key is pressed 5 times - Windows only)
- Laptops prompt for software updates

## TestNav Overview

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An overview of using TestNav, including: which version is needed, the advantage of completing a mock administration, and using Chromebooks.

### Required Version of TestNav

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The required version of the TestNav app is 1.8.x. To set up this version of the app, go to: <https://support.assessment.pearson.com/display/TN/Set+up+and+Use+TestNav>.

An error message will appear when attempting to launch if this version is not installed.

### Benefits of Conducting a Mock Administration

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Conducting a mock administration is **strongly recommended**. It is the best way to verify the technology setup is complete and accurate—the TestNav app is installed and equipment is configured correctly. It is also beneficial for testing staff to experience online testing in a dry-run, without examinees, to feel more comfortable and prepared for the actual test administration.

To complete the mock administration, refer to the [Mock Administration Guide](#) for instructions and use the PearsonAccess<sup>next</sup> training site found at <https://training.testadmin.act.org>. Be sure to use this training site for the mock administration, as it does not contain live test content. Live tests must not be accessed by anyone other than examinees on the test day.

**Important:** The mock administration must not be used as a practice test for examinees. It is a process used to verify that the test environment is working correctly.

### Confirming That Chromebooks Are Managed

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**ACT only supports managed Chromebooks.** You can manage your organization's Chrome devices from a single place using Chrome device management.

Before setting up TestNav on Chromebooks that will be used for testing, verify that the Chromebooks are managed. View the **See if your Chromebook is managed** information at <https://support.google.com/chromebook/answer/1331549?hl=en>.

## TestNav System Requirements

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Information about hardware and software requirements, virtual environments and thin clients, whitelisting, and using a wireless network.

**Note:** Technical requirements may change on a quarterly basis.

## Minimum Hardware Requirements for TestNav

To determine if your site has enough computers to test all examinees, use this formula:

$$[\text{number of devices}] \times [\text{number of days you plan to test}] = \text{examinee capacity}$$

For an optimal testing experience, avoid using any computer that takes 10 seconds or more to start and run applications.

**Table 3: Minimum Hardware Requirements**

Category	Windows	Mac OS	Chrome OS
Supported Devices	Desktop and Laptop	Desktop and Laptop	Chromebook
Processor	x86/x32 and x64	only Intel-based™	Any
Memory	2 GB Ram	2 GB Ram	2 GB Ram
Screen Size	9.5 inch	9.5 inch	9.5 inch
Screen Resolution	1024x768	1024x768	1024x768
Other Requirements	<ul style="list-style-type: none"> <li>Windows convertible devices are not supported in tablet mode</li> <li>Local File access to home directory</li> </ul>	<ul style="list-style-type: none"> <li>Local File access to home directory</li> </ul>	<ul style="list-style-type: none"> <li>Convertible Chromebooks cannot be used in tablet mode as a touchscreen device</li> <li>Touchscreen is not supported</li> </ul>
Recommendations	Wired hardware	Wired hardware	

**Important:** iPads and Linux devices are not supported at this time. An examinee's score will be canceled if an iPad or Linux device is used for testing.

## Virtual Environment and Thin Client Are Not Supported

ACT does not provide support for virtual environment and thin client technologies. If this technology is used, the test site is responsible for the security and performance of its virtual environment. It is recommended that sites planning to use this technology compare performance of the virtual environment to a non-virtual environment before proceeding.

## Software Requirements for TestNav

**Table 4: Supported Operating System, Download, and Setup for TestNav**

Operating System	Link to Download	Link to Setup Instructions
Chrome OS 74+	<a href="#">Chrome Web Store</a>	<a href="#">Set Up TestNav on Chrome OS</a>
OS X: 10.12, 10.13, 10.14+	<a href="#">TestNav Downloads</a>	<a href="#">Set Up TestNav on OS X</a>



Operating System	Link to Download	Link to Setup Instructions
Windows: 7, 8.1, 10 (includes Windows Store App)	<a href="#">TestNav Downloads</a>	<a href="#">Set Up TestNav on Windows</a>

## Whitelisting for TestNav

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The following urls and ports must be whitelisted or opened in any firewalls, proxy servers, or software used for Internet content filtering or inspection. Asterisks noted below are required as a "wildcard."

URL:Port

- \*.testnav.com:80
- \*.testnav.com:443
- \*.act.org:80
- \*.act.org:443
- \*.pearsonstestcontent.com
- \*.thawte.com
- \*.usetrust.com
- \*.comodoca.com
- .google-analytics.com
- https://dictionaryapi.com
- https://www.dictionaryapi.com
- https://media.merriam-webster.com
- http://media.merriam-webster.com

## Tips for Using a Wireless Network

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The increase in devices accessing organization networks increases the need for stable Wi-Fi networks, daily monitoring, and maintenance. To help network administrators stabilize Wi-Fi for online testing, use these tips.

- Disable low-end wireless protocols not being used
- Disable Wi-Fi on mobile devices to avoid potential interference
- Ask test rooms to stagger log in to minimize initial loading time on test day
- Conduct a site survey to determine how many wireless access points the organization needs
  - Evaluate existing infrastructure, network design, and Wi-Fi
  - Count the number of user devices
  - Examine the type of user traffic and interference
- Install access points more densely to decrease potential overload
- Reduce Wi-Fi interference from solid materials such as brick, concrete, metal, bookshelves, and cabinets
- Point adjustable Wi-Fi antennas at examinee devices or move examinee devices directly under the access point
- Make sure that no other Wi-Fi networks are using the same channel
- Check your access point user guide to determine if your access points can detect the least congested Wi-Fi channel
- Reduce interference from devices that may not be on Wi-Fi, but may use the same frequency to connect (i.e., cordless phones, Bluetooth-enabled devices, and examinee mobile devices)
- Temporarily turn off or unplug electronics to reduce wireless interference during testing

# Preparing TestNav

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Instructions to download TestNav, run the App Check, and freeze the test environment.

## Download TestNav on Windows

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1. Go to <http://download.testnav.com>.
2. Select the **Windows .msi installer** or **.exe installer**.  
The **.msi installer** file contains instructions about installing and removing an application and an installation wizard that will automatically install TestNav. The **.exe installer** file provides a setup wizard, and the ability to select the location that program files are saved.
3. Select the downloaded file or save and open, if required by your browser.  
The **Open File - Security Warning** appears with a message asking if you want to run the TestNav file.
4. Select **Run**.
5. The installer that was selected determines the next step.
  - If you downloaded the .msi installer, the installer window appears and automatically installs TestNav. When it's complete, skip to step [14](#) on page 10.
  - If you downloaded the .exe installer, continue to the next step.
6. Select **Yes**.  
The TestNav Setup Wizard appears.
7. Select **Next**.  
The **Select Destination Location** window appears.
8. Determine where to save TestNav program files.
  - By default, the files will save in C://Program Files (x86)\TestNav.
  - To save the files in another location, select **Browse** and choose the location.
9. Select **Next**.  
The **Select Start Menu Folder** window appears.
10. Determine where to save program shortcut files.
  - By default, the setup wizard stores program shortcuts in a Pearson folder in the **Start** menu folder.
  - To choose another location, select **Browse** and the location.
11. Select **Next**.
12. Select **Install**.
13. Decide if you want to launch TestNav.
  - By default the **Launch TestNav** checkbox is selected.
  - Deselect the checkbox to launch TestNav at another time.
14. Select **Finish**.  
Run the TestNav App Check.

## Download TestNav on Mac OS X

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1. Go to <http://download.testnav.com>.
2. Select **Download TestNav for another platform**.
3. Select the file that downloaded.  
The **TestNav install** window appears.

4. Drag the TestNav icon into the Applications folder.
5. Eject the TestNav installer from Devices in the Finder sidebar or from the desktop.

Run the TestNav App Check.

## Download TestNav on Chromebooks

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1. Log in to the **Admin console** for your domain.
2. Select **Device Management**>**Chrome devices**.
3. Select the icon at the top right of the screen for **Chrome device settings**.
4. Scroll down to **User Data** and select **Do not erase all local user data** if it's not already selected.
5. Look for **Kiosk Settings** above **Kiosk Apps** and ensure that the **Auto-Launch Kiosk App** drop-down is set to **None**.  
Make sure the examinee Chromebooks are under the organizational unit selected for TestNav.
6. Scroll down to **Kiosk Apps** and select **Manage Kiosk Applications**.  
The **Kiosk Apps** screen appears.
7. Verify that TestNav is listed in the **Total to Install** column.  
If TestNav is not listed, select **Chrome Web Store**, search for TestNav using the search field, select **Add**, and then select **Save**.
8. Scroll to the bottom of the page and select **Save**.

Run the TestNav App Check.

## TestNav App Check

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It is recommended that the TestNav App Check is run on every examinee device in the organization.

Running the App Check **without** a Configuration Identifier will confirm TestNav's ability to enter full screen or "kiosk" mode and check connectivity to Pearson's servers.

It also checks the testing computer for the following enabled features that need to be disabled:

- The ability to save multiple items in the Cloud Clipboard
- The ability to sync across devices in the Cloud Clipboard
- Airplay screen-saving

Running the App Check **with** a Configuration Identifier will also check the application's ability to communicate with the organization's defined saved response file (SRF) save locations and ProctorCache server.

## Locate the Configuration Identifier

1. Sign in to PearsonAccess<sup>next</sup> at <https://testadmin.act.org>.
2. Select the **Setup** icon, then **TestNav Configurations**.
3. Select or create the TestNav configuration.
  - If TestNav Configurations are set up in PearsonAccess<sup>next</sup>, select its name from the list, then select the drop-down on the **Start** button, and **Create/Edit TestNav Configurations**.
  - If the TestNav Configurations are not set up in PearsonAccess<sup>next</sup>, select the drop-down on the **Start** button, and then select **Create/Edit TestNav Configurations**.

The **Create/Edit** screen will appear. The Configuration Identifier will appear under the **Port** box. It will generate even if the IP address and Port are not entered.

Run the TestNav App Check.

## Run the TestNav App Check

Set up TestNav on each examinee device before running the App Check. For Chromebooks, open them in kiosk mode (open the app without logging in to the Chromebook) for the TestNav App Check to work. Locate the Configuration Identifier before completing the check.

1. Select the TestNav shortcut on your desktop or go to the **Start** menu and select All Programs, Pearson, and then **TestNav**.  
The **Customer Selection** screen appears.
2. Follow the appropriate next step.
  - If you administer only the ACT, select *The ACT* from the list.
  - If you administer more than one product using TestNav, go to the **User** drop-down, and select **Choose a different customer**, and then select *The ACT* from the list.
3. Select the **User** drop-down, and then **App Check**.
4. Enter the Configuration Identifier, or leave this field blank, and then select **Run App Check**.

**Note:** If an invalid Configuration Identifier is entered, an error message will appear.

A green success message will appear if the system passed, or a red failure message will appear if the system failed.

For sites using ProctorCache, or using a secondary save location (even if ProctorCache is not used), if the check was run before the TestNav Configurations were set up in PearsonAccess<sup>next</sup>, and the Configuration Identifier was not used, it is strongly recommended that the check be run again with the Configuration Identifier once the TestNav Configurations are set up.

## Freezing the Test Environment

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Once the test environment is configured for TestNav, "freeze" the configuration until online testing is finished at the organization. This means that all devices used for testing need to be administrator controlled during this time—no software of any sort should be downloaded or updated, including operating system updates. If the test environment must be updated before testing, or between testing windows, please rerun the TestNav App Check and "refreeze" the test environment.

## Verify That TestNav Configuration Is Complete

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Test coordinators may follow these steps to verify in PearsonAccess<sup>next</sup> that TestNav is configured.

1. Sign in to PearsonAccess<sup>next</sup> at <https://testadmin.act.org>.
2. Make sure your organization is selected in the top right of the screen, then select the **Reports** icon, and **Operational Reports**.
3. Select the box beside **Online Testing**, under **Report Categories**.
4. Select the report titled, **Organizations that have Precaching Server Configuration**.
5. Select **Organizations with Precaching Server Configuration** under the **Filter Options** drop-down, and then select the **Display Report** or the **Download CSV** button.

# Using Saved Response and Log Files

Information about **saved response files**, **log files**, save locations, and storing the information in PearsonAccess<sup>next</sup>.

## Understanding SRF and Log Files

When an examinee responds to a question, TestNav saves the response in a saved response file (SRF) and sends these responses to the Pearson server. After the responses successfully save to the server, TestNav deletes the SRF from the local computer. If the response does not save to the server, the SRF preserves the response on the local computer.

TestNav also writes to a log file during the test session. The log file helps to troubleshoot issues if they occur.

## Choosing a Save Location

We strongly recommend using the default primary save location. For the secondary save location, here are some pros and cons to consider when determining which location to use.

**Table 5: Pros and Cons of Save Locations**

Save Location	Pros	Cons
Directory on network computer	<ul style="list-style-type: none"> <li>• Backup file is accessible from other computers</li> </ul>	<ul style="list-style-type: none"> <li>• Uses more internal network bandwidth</li> <li>• Responses save to the network drive more slowly than to the local directory and as a result, test items take more time to load</li> <li>• Does not provide a secondary save location for Chromebooks</li> </ul>
Local directory on testing computer (TestNav client)	<ul style="list-style-type: none"> <li>• Uses less internal network bandwidth</li> <li>• Responses save to local directory more quickly than to the network drive and as a result, test items take less time to load</li> </ul>	<ul style="list-style-type: none"> <li>• Backup file is not accessible from any other computer</li> <li>• Does not provide a secondary save location for Chromebooks</li> </ul>
SFTP site	<ul style="list-style-type: none"> <li>• Provides secondary save location for all supported testing computers/devices</li> <li>• Chromebooks can only use SFTP as a secondary save location</li> </ul>	<ul style="list-style-type: none"> <li>• Requires SFTP site setup</li> </ul>

## Using a Network File Server as a Save Location

Here are a few tips for using a network file server as a save location.

- Do not use spaces in the save location path.

- Do not use a location that requires authentication. If authentication is required, TestNav cannot access the shared location.
- Do not use a Window Uniform Naming Convention (UNC) or network path on a device with macOS or Linux, such as \\ComputerName\SharedFolder\Resource. It's recommended that a mapped drive location is specified, such as D:\TopDirectory\NextDirectory\SaveLocation.

## Save Locations for TestNav—Windows and Mac OS X

1. Set up a primary and an optional secondary location for saved response files. Enter this information in the **TestNav Configurations** screen in PearsonAccess<sup>next</sup>.
2. Configure examinee user accounts to have complete read, write, and delete access in all save locations.

If using a secondary saved response file location, it is strongly recommended that a shared network folder, accessed from all testing devices, is used to ensure responses are not lost, even if an examinee cannot continue to test on the same device. Verify that the shared folder can be accessed from multiple testing devices.

The saved response files will automatically save to the default location, unless directed to save somewhere else. The log file save location cannot be changed.

**Table 6: Default Save Locations**

Operating System	SRF Location	Log File Location
Windows	{USER.HOME}\Pearson\srf\	{USER.HOME}\Pearson\logs\
Mac OS X	{USER_HOME}/Pearson/srf/	{USER_HOME}/Pearson/logs/

## Save Locations for TestNav—Chrome OS

For the Chrome OS, the saved response file default primary save location is on the local device. This cannot be changed. The secondary save location can be customized only to a secure file transfer protocol (SFTP).

### Save SRF and Log before Calling for Assistance—Chrome OS

If using Chrome OS, and you encounter an error, follow these steps to locate and save a copy of the saved response file and log file from the default location before calling for assistance.

1. Launch the TestNav app.
2. Focus your cursor in the username or password field.
3. Press <ctrl><shift>z.  
If nothing happens, select the window and press <ctrl><shift>z again.  
The **File Viewer** box appears.
4. Plug in a USB memory stick.
5. Select the **Download** button beside the SRF and log file(s) to download.
6. Select the memory stick and then select **Save**.

# Proctor Caching Overview

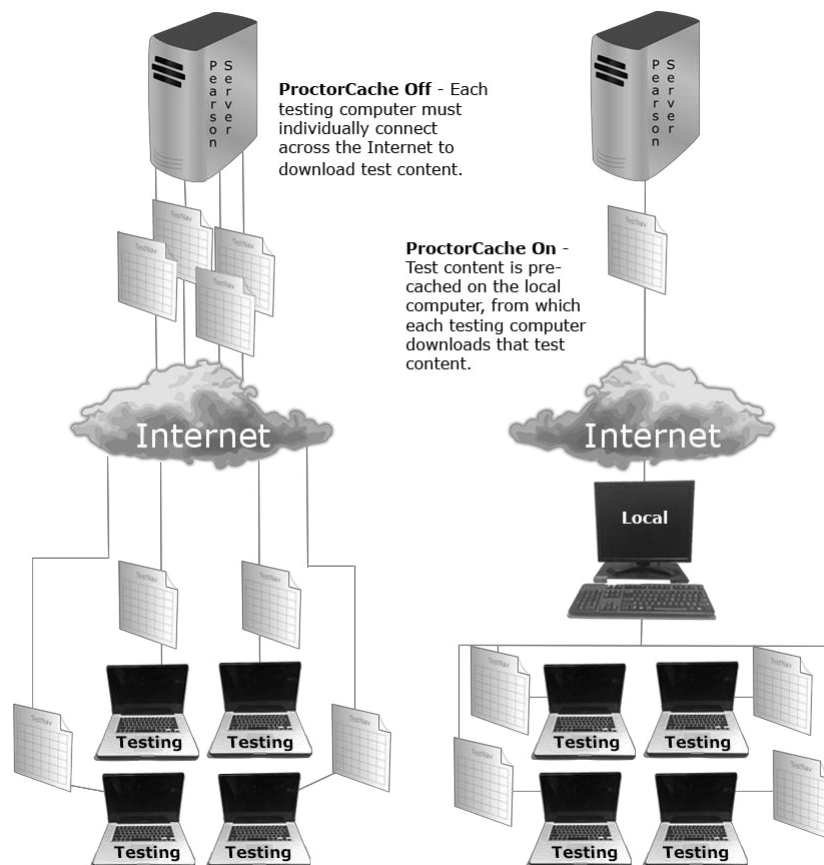
This is an overview of proctor caching and its benefits.

## Proctor Caching and Its Benefits

Proctor caching is the process of storing encrypted test content on a local computer using software called ProctorCache. This stored or cached test content is distributed to examinee devices during a test session.

Ways that proctor caching improves the online testing experience for examinees and testing staff:

- Examinees can complete testing even if the Internet connection fails (unless the examinee has not yet logged in and started testing).
- Delays caused by network congestion are reduced.
- The required amount of bandwidth is reduced, because the download redundancy caused by each examinee downloading an independent copy of the test is removed.



## Proctor Caching Process Overview

The test coordinator creates and prepares test sessions, and the technical coordinator precaches test content for each session. For that reason, the technical coordinator and test coordinator need to work closely together when test sessions are created, test content is precached, and test sessions are prepared.

**Table 7: Overview of Technical Coordinator's Role When Proctor Caching**

Stage	Description
1	Prepare the organization's network environment.
2	Identify proctor caching computer(s) and verify that they meet minimum system requirements.
3	Install ProctorCache software on all proctor caching computers.
4	Add the proctor caching settings to each organization in PearsonAccess <sup>next</sup> .
5	Use the TestNav App Check to verify connectivity between testing computers and proctor caching computers.
7	Precache the test content using PearsonAccess <sup>next</sup> two business days before testing begins.
8	Verify that all test content was successfully cached.
9	Monitor cached content and connections to the proctor caching computers.
10	After testing is complete, purge content from proctor caching computers.

## Proctor Caching System Requirements

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Information about hardware and software requirements and whitelisting.

### Minimum Hardware Requirements for Proctor Caching

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**Table 8: Minimum Hardware Requirements for Proctor Caching**

Computer	Windows
Processor	x86/x32 and x64 Minimum 2 GHz
Memory	2 GB RAM

### Software Requirements for Proctor Caching

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Supported Operating Systems for the use of ProctorCache software are Windows Server 2008, Windows 7, Windows Server 2012, Windows 8, Windows 10, Windows Server 2016, or Windows Server 2019.

### Whitelisting for ProctorCache

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The following urls and ports must be whitelisted or opened in any firewalls, proxy servers, or software used for Internet content filtering or SSL inspection.



URL:Port

- .act.org:80
- .act.org:443
- .pearsonestcontent.com
- .thawte.com
- .usertrust.com
- .comodoca.com
- .google-analytics.com

Default Port Settings for ProctorCache (LAN traffic): port 4480 and port 4481

## Preparing to Use ProctorCache Software

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Information about prerequisites, selecting proctor caching computers, installing the software, using an upstream proxy server, and configuring proctor caching computers.

### Staff and System Prerequisites

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The following are prerequisites for installing ProctorCache software.

The technical coordinator needs:

- Full local administrator permissions
- Working knowledge of the organization's network
- A user account in PearsonAccess<sup>next</sup> with the technical coordinator role for the product and organization in the current year

The organization's system needs:

- Fixed internal IP addresses
- A network connection on 100 Mbps full-duplex or higher (the minimum is 10/100)
- A network set up to use IPv4 Domain Name System (DNS) servers
- A network set up to use IPv6 DNS servers, if no explicit changes were made to use IPv6

TCP Ports need to be open:

- 80 (Internet); 443
- 4480 and 4481 (local network)

**Note:** Using proctor caching does not require special hardware, equipment, or an underlying server-based operating system.

### Choosing Proctor Caching Computers

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Select proctor caching computers:

- With Windows OS; ProctorCache software only works on Windows
- On the same network as examinee testing computers
- In the same building as examinee testing computers
- That take 10 seconds or less to start and run applications
- Dedicated to running ProctorCache software when precaching test content and during testing
- That can remain powered on when precaching test content and during testing

Do not select computers:

- That will be used by examinees
- That are tasked with network services such as a domain controller (i.e., Active Directory Server, Print Server, etc.) or any task other than proctor caching

## Install ProctorCache Software

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1. On the selected proctor caching computer, go to <http://download.testnav.com>.
2. Select **Download ProctorCache**.  
A file downloads.
3. Open the downloaded file.  
The installer screen that includes a security message opens.
4. Select the **Run** or **Yes** button to launch the installer.  
The software loads and an introduction screen appears.
5. Read the introduction, and then select the **Next** button.  
Proxy information is displayed. The Server Name defaults to the computer name.
6. Take one of the following steps to complete the proxy information screen.
  - If the site is not using a proxy server, accept the default destination folder and select the **Next** button.
  - If the site is using a proxy server, verify that the proxy server information is correct or enter the correct value, accept the default destination folder, and select the **Next** button.
  - If the site is using an upstream proxy server to access the Internet, see Using an Upstream Proxy Server to enter the correct value and to set the appropriate destination folder. Then, select the **Next** button.
7. Take one of the following steps.
  - If the site is not using an upstream proxy server, select the location to create the ProctorCache icon(s), check the box beside **Create icons for all users**, and then select the **Next** button.
  - If the site is using an upstream proxy server to access the Internet, see Using an Upstream Proxy Server to select the location to create the ProctorCache icon(s). Then, check the box beside **Create icons for all users**, and select the **Next** button.

The **Start ProctorCache** page will appear.
8. Verify that the box beside **Start ProctorCache automatically when install completes** is checked, and then select the **Next** button.  
A preinstallation summary appears.
9. Review the summary, and then select the **Install** button.  
The ProctorCache software installs.
10. Select the **Done** button.
11. Restart the computer.

See Configure Proctor Caching Computers to complete the set up.

## Using an Upstream Proxy Server

Use this table as a guide to enter the correct values when installing ProctorCache software if the site is using an upstream proxy server.

**Table 9: Values for an Upstream Proxy Server**

If the upstream proxy server is ...	Find this file ...	Change the value ...	To the new value ...
Authenticated	<install_dir>squid\etc \squid.conf	##cache_peer address parent port 0  login=user:pass default no-query http11	cache_peer <proxy server IP address> parent <proxy server port number> 0  login=<user ID>:<password> default no-query http11
		##never_direct allow all	never_direct allow all
Unauthenticated	<install_dir>squid\etc \squid.conf	##cache_peer address parent port 0  login=user:pass default no-query http11	cache_peer <proxy server IP address> parent <proxy server port number> 0 default no- query http11
		##never_direct allow all	never_direct allow all

## Configure Proctor Caching Computers

The technical coordinator needs to have an account with the technical coordinator role in PearsonAccess<sup>next</sup> to complete these steps.

The technical coordinator will set up **TestNav Configurations** in PearsonAccess<sup>next</sup> to set up proctor caching computers.

1. Log in to <https://testadmin.act.org>.
2. In the top right of the screen, select the test administration and organization(s).
  - If you are configuring proctor caching computers at the school level for one site, select that organization.
  - If you are configuring proctor caching computers at the district level for all sites in the district, select the district.
3. Select the **Setup** icon, then **TestNav Configurations**.  
The **TestNav Configurations** screen appears.
4. On the **Tasks** pane, select the drop-down on the **Start** button, then **Create/Edit TestNav Configurations**.
5. Enter a name for the configuration settings for the organization(s).
6. Follow one of these steps.
  - If you are completing this at the school level for one site, select that organization.
  - If you are completing this at the district level for all sites in the district, select all of the organizations this configuration will apply to.
7. Enter the computer name of the proctor caching computer.  
The proctor caching computer may be given a name that makes it easy to use.
8. Locate and enter the IP address of the proctor caching computer.  
Open the Command Prompt and type IPCONFIG for the IP address to display.  
**Note:** The proctor caching computer must have a static IP address.
9. Enter 4480 in the Port field.

10. Enter the saved response file locations and other requested details from the proctor caching computer, and then select the **Create** button.

**Note:** The saved response file locations may be left at the default settings, or changed and entered later.

11. The number of proctor caching computers determines the next step.

- If one proctor caching computer will be used, continue to step 12 on page 20.
- If more than one proctor caching computer will be used, select **Create Configuration** from the list on the left side of the screen. Select **Add** and complete the proctor caching configuration, repeating steps 3 on page 19 through 12 on page 20, for each computer.

12. Open a new browser and go to `http://<ip-address>:<port>` to verify the connection to each proctor caching computer.

If the ProctorCache interface does not appear, reference the installation instructions. If ProctorCache software is still not installing correctly, note the error code and call ACT for assistance.

Once ProctorCache software is installed and connecting properly, the next step is to cache test content.

## Caching Test Content

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Information about precaching test content, verifying that it cached, precaching again if necessary, and purging content after testing is complete.

### Precache Test Content

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The test coordinator needs to create all test sessions before the technical coordinator precaches test content for them.

Precache test content within the two business days before each test date.

1. Turn on the proctor caching computer(s) and open the ProctorCache software on these device(s).  
ProctorCache software needs to be running for content to precache.
2. Using a device other than the proctor caching computer, allow browser pop-ups, and then log in to PearsonAccess<sup>next</sup> at <https://testadmin.act.org>.
3. Select the **Setup** icon, then **Precache By Test** button.
4. Select the test to precache, select the Precache Server, and then select the **Precache** button.  
A pop-up window opens.
5. Select **Precache** again.
6. Open a new browser window and go to `http://<ip-address>:<port>` to verify the connection to the proctor caching computer.

If the ProctorCache interface does not appear, reference the ProctorCache software installation instructions or contact ACT for assistance.

### TestNav ProctorCache Screens

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On the proctor caching computer, the TestNav ProctorCache screen contains **Tests** and **Clients** tabs at the top right, that are used to verify that test content cached, and to monitor proctor caching activity during testing.

Columns listed on the **Tests** tab include:

- **Test:** shows the product that will be administered
- **Form:** lists test form numbers
- **Status:** indicates whether the test content was successfully cached for the test form
- **Entries:** counts the number of examinees who access the test form during testing
- **Cache Date:** displays the date the content was cached

Information on the **Clients** tab, includes a list of all clients (examinee computers) that recently requested test content. The computers are displayed by name, IP address, and platform.

## Verify That Test Content Cached

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Verify that test content cached and resolve any issues before testing. Check the status again on the test date before testing. In limited situations, content that had been in the "Green OK" status changes to another status. If this occurs, precache the test content again for only the test sessions that are not a status of "Green OK."

1. Start the proctor caching computer and open the ProctorCache software.
2. Select the **Tests** tab.  
The **Tests** screen appears.
3. Review the status of all test sessions.
  - Green OK—content is successfully cached
  - Yellow not loaded—content is not cached
  - Yellow waiting—content is waiting to be loaded
  - Yellow loading—content is currently loading
  - Red failed to load content—caching content failed
  - Red MD5 check invalid—MD5 comparison failed
  - Red MD5 mismatch—MD5 comparison succeeded, but files did not match

**Note:** If either Red MD5 message appears, call ACT for assistance.

Refer to the Precache Test Content instructions to resolve issues. Note the error code and call ACT, if assistance is needed.

## Monitor Proctor Caching Activity During Testing

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During testing, ProctorCache activity may be monitored on the **Tests** and **Clients** screens of a proctor caching computer.

1. Start the proctor caching computer and open the ProctorCache software.
2. Select the **Tests** tab.  
The **Tests** screen appears.
3. View the Test, Form, Status, Entries, and Cache Date columns.
4. Select the **Clients** tab, to the right of the **Tests** tab.  
The **Clients** screen appears with a list of clients (examinee computers).
5. View the computers by name, IP address, and platform.

## Purge Cached Test Content

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For test security, test content needs to be purged from proctor caching computers at the end of the testing window.

**Note:** Do not purge test content until the end of the testing window unless otherwise directed by ACT or Pearson.

1. Start a proctor caching computer and open the ProctorCache software.
2. Select the **Tests** or the **Clients** tab.  
To filter the list, enter search criteria and select a value from the drop-down list. Select the **Clear** button to remove the filter.
3. Select the box beside the test or client to purge.
4. Select the **Purge** or **Purge Client** button.
5. Enter the following proctor password in the pop-up window: **t35t1n6**.

Repeat these steps on every proctor caching computer.

## **Delete Saved Response and Log Files**

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Purging test content does not delete saved response files or log files. These files may be deleted after testing is complete.