**Contact Information**

**Phone:** +1.319.337.1526  
Following the greeting:  
For Test Administration: Press 1 to connect to ACT Test Administration  
For Technical Support: Press 2 to connect to PSI

**Email:**  
Test Administration: OSUS@act.org  
Technical Support: install@psionline.com

**Chat:**  
PSI Technical Support: https://techsupportchat.psiexams.com/techsupportchat/indexact.jsp

**Resources**

**Web page:** https://www.act.org/content/act/en/products-and-services/the-act/international-cbt.html  
This web page contains the following resources to use in conjunction with this guide:  
- Technical requirements  
- Technical coordinator roles and responsibilities  
- *The ACT Administration Manual for International Online Testing*
# Table of Contents

Overview .................................................................................................................................................... 3
Staff Roles and Responsibilities ................................................................................................................ 3
  Test Coordinator .................................................................................................................................... 3
  Technical Coordinator ........................................................................................................................... 3
Testing System Software .......................................................................................................................... 3

Test Site Planning ..................................................................................................................................... 4
  Test Center and Proctor Credentials ......................................................................................................... 4
  Technical Requirements ........................................................................................................................... 4

Site Readiness ........................................................................................................................................... 5
  Timeframes and Deadlines ....................................................................................................................... 5

Test Site Preparation ................................................................................................................................. 5
  Before You Begin ..................................................................................................................................... 5
  Server and Workstation Installation ........................................................................................................... 5
    Disable Automatic Application Launching .............................................................................................. 6
    Configure Products or Applications that Restore the Computer ............................................................. 6
    Prepare Local Content Server ............................................................................................................... 6
    Prepare Proctor Workstations ................................................................................................................ 7
    Prepare Examinee Workstations ............................................................................................................ 8
    Verify Site Readiness ............................................................................................................................ 9
  How to Set Up and Use Spare Examinee Workstations ......................................................................... 9
  Upgrade Server and Workstation Installation ............................................................................................ 9
    Upgrade Local Content Server ............................................................................................................. 10
    Upgrade Examinee Workstations ......................................................................................................... 10
    Verify Site Readiness .......................................................................................................................... 11
  Automatic Software Updates .................................................................................................................... 11
  Installing Updates to the PSI Secure Browser .......................................................................................... 11
Overview

This guide provides technical coordinators and test coordinators with planning, site readiness, and technical guidance for administering the online ACT® test. This guide, in conjunction with the technical requirements, found on the Technical Requirements web page, provides guidelines and step-by-step instructions for planning and preparing the test site environment, installing the correct software required on the devices to be used for testing, and protecting the security of the online administration.

It is incumbent upon the technical coordinator and test coordinator to check the technical requirements prior to each test administration for possible changes or additions. The installed software will check the devices for conformity with these requirements to ensure that the devices meet ACT’s hardware, software, networking, and other technical requirements.

Staff Roles and Responsibilities

Test Coordinator
The test coordinator works closely with the technical coordinator and must be able to gather, facilitate, and complete the information as it relates to site readiness. They are also responsible for contacting PSI to request login credentials for their testing staff.

Technical Coordinator
The technical coordinator must be able to understand, implement, and orchestrate the technical procedures outlined within this guide in addition to the pre-defined responsibilities as outlined on the web page (see Resources). They work closely with the test coordinator to report site readiness to ACT. The technical coordinator must be present at the test center on test day and be available to help resolve any technical issues that may occur during testing.

Testing System Software

The following information lists and describes the systems each test site will use to administer the ACT:

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Content Server</td>
<td>This local server acts as an intermediary and data storage location to deliver the exam to the test workstations and PSI remote servers.</td>
</tr>
<tr>
<td>OPS 4.X Proctor System</td>
<td>Testing staff (i.e., test coordinators, room supervisors, and proctors) uses the OPS system to start, monitor, and manage online testing.</td>
</tr>
<tr>
<td>PSI Secure Browser</td>
<td>Examinees use the PSI Secure Browser to take the test.</td>
</tr>
</tbody>
</table>

IMPORTANT! Be sure the local content server is turned on one week before testing, during testing, and for two weeks after testing. While we strongly advise you do not reimagine your local content server between test administrations, you must wait at least two weeks after testing if you plan to reimagine the computer you use as your local content server. This ensures that testing data transfers back to ACT successfully.
Test Site Planning

Test Center and Proctor Credentials
Gather the following information before beginning any installation procedure:

- **Credentials**
  
  Note: PSI will provide credentials in a separate communication. Keep them secure and where you can access them on test day. ACT cannot provide login credentials or unlock accounts. Contact PSI if need login assistance.
  
  - Test center name
  - PSI test center ID
  - PSI proctor username
  - PSI proctor password
  - PSI access code (used to launch or exit the PSI Secure Browser)

- **Examinee workstation seat numbers** (see Prepare Examinee Workstations)

Technical Requirements
Technical specifications are located on the Technical Requirements web page. All devices should meet the requirements listed for their assigned station type.

The table below shows additional information you need to know before installing software:

<table>
<thead>
<tr>
<th>Category</th>
<th>Information You’ll Need to Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Devices and Workstation Connectivity</td>
<td>Each site will need a modem, router with firewall, and potentially switches.</td>
</tr>
<tr>
<td></td>
<td>All devices (e.g., servers, workstations) must be connected via Ethernet cable (“hard-wired”).</td>
</tr>
<tr>
<td></td>
<td>Wi-Fi is not permissible.</td>
</tr>
<tr>
<td></td>
<td>Configure firewalls to permit traffic on ports 80, 443, and 8080 between all testing devices.</td>
</tr>
<tr>
<td>Internet Connection</td>
<td>What type of internet connection is in use on location</td>
</tr>
<tr>
<td></td>
<td>Internet download and upload bandwidth/speed</td>
</tr>
<tr>
<td>Local Content Server</td>
<td>Must be a Windows PC (tower) or laptop (no Macs or Unix)</td>
</tr>
<tr>
<td></td>
<td>Must be assigned to a static IPv4 address</td>
</tr>
<tr>
<td></td>
<td>Your local content server has different requirements if you deliver 50 or fewer exams at once or if you deliver up to 100 exams at once. If you wish to deliver more than 100 exams at once, please contact ACT. For full details, refer to the Technical Requirements web page.</td>
</tr>
<tr>
<td></td>
<td>Set up the local content server in a secure location where only authorized staff will have access to it.</td>
</tr>
<tr>
<td>Proctor and Examinee Workstations</td>
<td>Room supervisors use a separate proctor workstation to administer the test</td>
</tr>
<tr>
<td></td>
<td>Each test site should have at least one proctor workstation per 25 examinees in the room</td>
</tr>
<tr>
<td></td>
<td>Number of devices to be used for administrative access</td>
</tr>
<tr>
<td></td>
<td>Position the proctor workstation in an area where the room supervisor can see all examinees in the room.</td>
</tr>
<tr>
<td></td>
<td>Number of devices available for examinees to use</td>
</tr>
<tr>
<td></td>
<td>Types of devices</td>
</tr>
<tr>
<td></td>
<td>Device owner/administrator</td>
</tr>
<tr>
<td>Operating System, Processor, Memory</td>
<td>Operating system for each device</td>
</tr>
<tr>
<td></td>
<td>Processor for each device</td>
</tr>
<tr>
<td></td>
<td>Memory for each device</td>
</tr>
<tr>
<td>Monitors</td>
<td>Screen resolution for each device</td>
</tr>
<tr>
<td></td>
<td>Display-size of each device</td>
</tr>
<tr>
<td>Browsers</td>
<td>Web browser to be used</td>
</tr>
</tbody>
</table>
Site Readiness

Site readiness is a process that occurs following technical setup. It verifies whether test sites can successfully demonstrate the capability to deliver the online tests. It includes activities to verify whether examinee devices can successfully deliver test content and if the proctor devices can successfully check in and administer the tests (see steps 20–22 in Prepare the Examinee Workstations).

Timeframes and Deadlines

The deadline for completing site readiness is two weeks before testing begins for every testing event. Complete these activities preferably at least six weeks, no later than two weeks, before the testing event:

- Four to six weeks before each administration, contact PSI to initiate the readiness process and set up demo tests.
- Work closely with PSI to ensure that all workstations that could be used for testing are operational.
- Setting up and using spare examinee workstations is encouraged. For more information, see How to Set Up and Use Spare Examinee Workstations.

If your site performed well for previous testing events, the abbreviated readiness steps below can be performed. Complete these activities preferably at least six weeks, but no later than two weeks, before the testing event:

- Verify your machines can turn on and connect to the Internet.
- Run one demo on an examinee workstation. You will need to contact PSI via telephone, email or chat at least one day before you intend to run a demo, and again after the demo has completed to verify with PSI the demo was received correctly. See Contact Information.

Important: After your site has proved site readiness, ensure all proctoring workstations, examinee workstations, and the content server remain in a state of readiness until two weeks after testing.

Once your site has proved site readiness, you are prohibited from making any hardware or software changes to the equipment until two weeks after all data has been received by PSI.

Any changes to hardware or software will invalidate site readiness, and you will be required to perform readiness again.

Test Site Preparation

Before You Begin

Ensure that network devices, the local content server(s), and workstations meet Technical Requirements.

Server and Workstation Installation

Installing the software components for online testing is a multi-part process:

1. Prepare the local content server
2. Prepare the proctor workstation(s)
3. Prepare the examinee workstations
4. Perform site readiness testing.

Follow the instructions in sequence to ensure successful installation. The server installation should only be done on one (1) computer at every test center.
Disable Automatic Application Launching
The PSI Secure Browser is to be the only application running on an examinee computer during testing. Disable the automatic launch feature for any other computer applications. Common automatic launches include:

- Anti-virus software performing automatic updates
- Power management software on laptops warning of low battery
- Screen savers and sleep mode
- Email and calendar notifications
- Skype and other instant message notifications
- Sticky keys
- Window 10 shortcuts

*Note: Disable the screen saver. If active, it may cause an error message and result in the need to resume a test.*

Configure Products or Applications that Restore the Computer
Products such as Faronics Deep Freeze and Carbonite Backup are used to restore a computer system to a pristine (base) state after the system has been used or modified.

If Deep Freeze or a similar product is in use on your network, you will need to make sure the PSI testing software is part of the base state on test or proctor workstations so that it is not removed when the system is restarted or returned to the base state by the software. Automatic updates to the PSI Secure Browser will require a base state on test and proctor workstations to be recaptured. The local content server cannot have Deep Freeze or a similar product installed, because it exchanges critical data that cannot be erased.

Prepare Local Content Server
Take the following steps to prepare the local content server:

<table>
<thead>
<tr>
<th>Secure the content server</th>
<th>1. Disable Bluetooth and Wi-Fi.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install the local content server</td>
<td>2. Uninstall Deep Freeze or similar software.</td>
</tr>
<tr>
<td></td>
<td>3. Download the .zip file. Contact PSI for the url for the most current version of the file.</td>
</tr>
<tr>
<td></td>
<td>4. Extract the file to the root C directory.</td>
</tr>
<tr>
<td></td>
<td>5. As administrator, open the application psi-lc-ops-4.x.</td>
</tr>
<tr>
<td></td>
<td>6. Follow the steps on screen to extract the file(s).</td>
</tr>
<tr>
<td></td>
<td>7. On the Welcome screen, select Next.</td>
</tr>
<tr>
<td></td>
<td>8. On the following screen, select Next.</td>
</tr>
<tr>
<td></td>
<td>9. Enter the PSI Test Center ID.</td>
</tr>
<tr>
<td></td>
<td>10. Enter the Test Center Name.</td>
</tr>
<tr>
<td></td>
<td>11. Leave Installation Type as PRODUCTION.</td>
</tr>
<tr>
<td></td>
<td>12. Leave the URLs listed as is.</td>
</tr>
<tr>
<td></td>
<td>13. Select Next.</td>
</tr>
<tr>
<td></td>
<td>15. On the Configure Memory Settings screen, select Next.</td>
</tr>
<tr>
<td></td>
<td>17. On the next screen, select Finish.</td>
</tr>
<tr>
<td>Locate the local IPv4 address</td>
<td>18. Use the following command to find the local IPv4 address: Run &gt; CMD &gt; ipconfig</td>
</tr>
</tbody>
</table>

*Note: Write down the local IPv4 address. It is required for the proctor and examinee workstation setups.*
**Prepare Proctor Workstations**

Take the following steps to install the required software at each proctor workstation:

*Note: Google Chrome is the only approved browser for the proctor role in ACT online testing.*

### Install Adobe Reader
2. Uncheck all optional offers, then select **Download Acrobat Reader**.
   *Note: The workstation may already have this software installed. Make sure the computer has the most current version.*

### Add the local IPv4 address to the proctor station hosts file configuration
4. Follow the onscreen instructions to update the hosts file.

### Secure the proctor workstation
5. Disable Bluetooth and Wi-Fi.

### Bookmark the proctor workstation url
6. Go to: [https://www.proctoringstation.com/](https://www.proctoringstation.com/).
7. Bookmark the url.

### Check for examinees
8. Log in using the PSI-provided proctor login credentials.
   *Note: During the first login instance, testing staff will need to check Update Profile.*
9. On the **Download Sessions** tab, select the **Download** button, then **OK**. Wait for the download to finish or for confirmation no session exists for today. This step only needs completed on the first proctor station.
10. If you have candidates scheduled for today, select the **Candidates** tab to display the current list of examinees.
    *Note: If you do not have any candidate or demo exams scheduled, you will not be able to view the candidates tab.*

---

Repeat this process for each proctor workstation.
Prepare Examinee Workstations

Assign a seat number for each examinee workstation

The procedure for preparing each examinee workstation requires the tech coordinator to enter a seat number. Assigning seat numbers in advance allows for easy seat assignment in the testing system.

Use the following sample information as a guide when assigning examinee workstation seat numbers:

Test site capacity = 100 examinee workstations (seats)

<table>
<thead>
<tr>
<th>If you are in test room...</th>
<th>And the number of examinee workstations in that room is...</th>
<th>Then assign the following seat numbers to that room:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>1–25</td>
</tr>
<tr>
<td>2</td>
<td>25</td>
<td>26–50</td>
</tr>
<tr>
<td>3</td>
<td>25</td>
<td>51–75</td>
</tr>
<tr>
<td>4</td>
<td>25</td>
<td>76–100</td>
</tr>
<tr>
<td>Total test rooms: 4</td>
<td>Total examinee workstations: 100</td>
<td>Total seat numbers: 100</td>
</tr>
</tbody>
</table>

Label the seat numbers clearly so they are easily identifiable to test coordinators and candidates. Share the examinee workstation seat numbers with the test coordinator and room supervisors.

Install Required Software

Take the following steps to install the required software at each examinee workstation:

1. Close 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 before testing begins.

2. Enable the examinee workstation policy that prevents USB and other external storage device operation. USB and other external storage devices can’t be in use on any computers.

3. If the examinee workstation is a Mac, disable the right-click/secondary click.

4. Enable Automatic Application Launching to ensure that testing will not be interrupted by updates, system events, or other notifications that might occur.

5. Disable the screen saver, if active.

6. Disable Bluetooth and Wi-Fi.


8. Follow the onscreen instructions to update the hosts file.


10. Extract the PSI Secure Browser.

11. Install the extracted version of the PSI Secure Browser.

12. Launch the PSI Secure Browser.

13. On the Security Check page, if all the security requirements are met, select Next, or else kill the application that is open and select Recheck.

14. Select the PSI logo in the upper-left corner of the screen.

15. Log in with the appropriate PSI proctoring credentials.


17. Choose the seat number assigned to the workstation.

18. Select Submit.

19. Document the seat number assignments by labelling the seat numbers clearly so they are easily identifiable to test coordinators and examinees. Make a map if necessary and provide to the test coordinator.

20. Once the workstation has been successfully configured, you will have the option to click the Test Demo Exam button to launch a demo test. This
option will work only if you have contacted PSI at least one day in advance to schedule a demo session.

*Note: Demo sessions will not be available and should not performed 24 hours before or during an ACT testing window.*

21. Once the demo test launches on the test workstation, answer five questions in the test to ensure correct functioning.

22. Select the **End Section** button, then the **Continue** button, then the **OK** button to exit the demo exam.

<table>
<thead>
<tr>
<th>Finish preparing the workstation</th>
<th>23. Exit the browser.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a. Type Ctrl+T on the keyboard.</td>
</tr>
<tr>
<td></td>
<td>b. Enter the <strong>PSI access code</strong>.</td>
</tr>
<tr>
<td></td>
<td>c. Select <strong>OK</strong>.</td>
</tr>
<tr>
<td></td>
<td>d. Select the <strong>Quit</strong> button.</td>
</tr>
</tbody>
</table>

After confirming your OPS 4.X server has updated to the latest version (see [Prepare Local Content Server](#)), launch the PSI Secure Browser on each examinee workstation and allow it to update (see [Upgrade Examinee Workstations](#)).

**Verify Site Readiness**

PSI will need to create a demo test session for your test center before you can run demo exams. Contact PSI at least 24 hours in advance before you plan to run demo exams on your examinee workstations.

**How to Set Up and Use Spare Examinee Workstations**

It is a good idea to prepare additional workstations to use as spares. If there are any issues with workstations on testing day, spare workstations can be quickly reassigned and used.

To set up additional workstations to use as spares:

1. Install/configure the software on the extra seats as described in the previous section.
2. Set up the seat number for all spare seats to be seat number 1.
3. Run a demo exam to verify the workstation is functioning correctly.

To use a spare seat during a testing session:

1. Set up the seat number of the spare workstation to be the same seat number as the ‘problem’ seat.
2. Do **not** run a demo exam.
3. Log in in the examinee as usual.

**Upgrade Server and Workstation Installation**

This section provides instructions for installing a new version of server and workstation software when a previous version was already installed.
Upgrade Local Content Server

Perform steps 1-5 in this section only if you have installed a previous version of OPS (i.e., version 4.1.0.9). If you already have version 4.5.1.5 or later installed you will still need to perform steps 6-7 below. Check with PSI to confirm you have updated to the latest version.

To view your installed version, select ACT Proctoring. The version number is displayed below the Login box (as shown below).

Perform these steps to upgrade the local content server:

1. Stop the TomEE service.
2. In Control Panel, select Programs and Features and uninstall LC-OPS.
3. Restart the Local Content Server.
4. Rename PSI-OPS-HOME folder, if still present on the C drive, as `PSI-OPS-HOME.old'
5. Reinstall OPS by following steps 3–17 under Prepare Local Content Server.
6. Keep your OPS server on for the next 48 consecutive hours to allow it to automatically check for and install updates. Check your OPS version regularly until you see the version number report the most up-to-date version. If you still have not received the update to the latest version after 48 hours, contact PSI support for assistance.
7. Download the day's session by following steps 8–10 under Prepare Proctor Workstations.

After upgrading the local content server, be sure to upgrade all examinee workstations by following the steps below under Upgrade Examinee Workstations.

Note: If available, Autoupdater checks for a newer version and, if found, downloads it and updates the server. For more information, see Automatic Software Updates.

Upgrade Examinee Workstations

Perform the steps 1–4 in this section only if your PSI Secure Browser version is older than 1.0.10. Perform steps 4–5 if your OPS server version changed.

Important: If you are upgrading to 4.5.1.5 for the first time, you will need to update the server's security certificate. Contact PSI for the OPS 4.5.1.5 update document.

Perform these steps to upgrade the PSI Secure Browsers:

2. Extract the PSI Secure Browser.
3. Install the extracted version of the PSI Secure Browser on top of the already installed browser.
4. After confirming the OPS server has updated to the latest version, launch the PSI Secure Browser on each workstation to allow it to update.

5. Run a Test Demo Exam after scheduling a demo session with PSI to verify flow by following steps 12–22 under Prepare Examinee Workstations.

Note: If available, Autoupdater checks for a newer version of the PSI Secure Browser and, if found, downloads it to the OPS server. The downloaded version is installed when the secure browser is launched. For more information, see Automatic Software Updates.

Verify Site Readiness
After installing all testing workstations and running the demo test on each, answer the questions in the readiness email and send to OSUS@act.org.

Automatic Software Updates
OPS includes a component called Autoupdater that manages software updates. It runs in the background, once per hour, to check for a newer version of the OPS software and the PSI Secure Browser. For the Autoupdater to function FCTest.properties must be present in the root C:\ drive, regardless of where OPS is installed. Please contact PSI for the file.

- **OPS version 4.5.1.5 or later**: Autoupdater checks for newer version and, if found, downloads it to the server. After download, Autoupdater attempts to install the software patch between 11:00 pm and 5:00 am of the test center’s local time. Prior to installing, Autoupdater backs up the existing OPS software and validates the health of the upgrade after installation.
  - If the update was installed successfully, the version number in the proctoring station user interface (https://www.proctoringstation.com) displays the version of the software patch.
  - If the update is found to not be stable, Autoupdater rolls back to the last stable version, so that the site can remain operational.

- **PSI Secure Browser version 1.0.9 or later**: Autoupdater checks for a newer PSI Secure Browser version and, if found, and downloads it to the OPS server. The downloaded updates are installed when the PSI Secure Browser is launched. See Installing Updates to the PSI Secure Browser, below.

Important: No automatic updates are available for OPS software versions below 4.0.0.24. You must manually perform a fresh install OPS 4.0.0.24 and the PSI Secure Browser 1.0.9 to enable automatic updates.

Installing Updates to the PSI Secure Browser
On launch, the PSI Secure Browser checks if an update was downloaded to the OPS server. If so, the installation will begin automatically.

The PSI Secure Browser displays information about the available update.
The Choose Installation Options dialog is displayed.

1. Select **Anyone who uses this computer (all users)** and select **Next**.
2. After the installation is complete, select **Finish**.
3. Restart the PSI Secure Browser to proceed with testing.