

Cengage web-based learning platforms require broadband internet access and supported web browsers and plugins.

SYSTEM REQUIREMENTS

SUPPORTED BROWSERS ON WINDOWS®

Browser	MindTap™	SAM	WebAssign	CNOWv2 / OWLv2
Chrome™	79 and 80	current and preceding version	79 and later	current and preceding version
Firefox®	72 (Windows 10 only)	current and preceding version	74 and later	current and preceding version
Edge	18 (Windows 10 only)	current and preceding version	17 and later	current and preceding version

SUPPORTED BROWSERS ON MACOS™

Browser	MindTap	SAM	WebAssign	CNOWv2 / OWLv2
Chrome	79 and 80	current and preceding version	79 and later	current and preceding version
Firefox	unsupported	current and preceding version	unsupported	current and preceding version
Safari®	13	current and preceding version	13 and later	current and preceding version

LINUX® AND IOS

Cengage learning platforms have only limited support on Linux and iOS; these operating systems are not recommended for school computer labs.

WORKSTATION RECOMMENDATIONS

- Download bandwidth: 5+ Mbps/student
The total lab bandwidth should be sufficient for the number of workstations.
For example,
30 workstations × 5 Mbps = 150 Mbps.
- RAM: 2+ GB
- CPU: 1.8+ GHz / multi-core
- Display: 1366 × 768, color
- Graphics: DirectX, 64+ MB
- Sound (for some content)

BROWSER SETTINGS

Configure the following settings in your web browser.

IMPORTANT In a lab where students share computers, make sure that browser data, including cached files and cookies, is automatically cleared between user sessions.

See your browser's help information for specific instructions.

- Allow cookies and pop-up windows for the following sites:
cengage.com and subdomains of cengage.com such as gateway.cengage.com
sam.cengage.com
webassign.net
cengagenow.com and subdomains of cengagenow.com
cengage.celebrus.com

Cengage uses an encrypted cookie file to authenticate your identity each time you give or request information like activities or grades. This helps to protect your information without requiring you to sign in repeatedly. The cookie is deleted when you sign out or close your browser.

NOTE To allow pop-up windows, you might need to configure or turn off third-party extensions or toolbars in addition to your browser settings.

- Accept third-party cookies.
Third-party cookies are used for authentication with some learning management systems (LMS) such as Blackboard.
- Allow JavaScript.
This is the default setting.
- Set your browser to check for newer versions of cached pages and refresh automatically.

BROWSER PLUGINS

Some content and tools might require the following browser plugins.

Adobe® Flash® Player, version 10 or later

For supported versions of Chrome and Edge browsers, Flash is embedded but must be enabled.
helpx.adobe.com/flash-player.html

Apple® QuickTime®

support.apple.com/downloads/quicktime

Java

The Java plugin is not supported in Chrome or Microsoft Edge. Use Safari or Firefox to access Java content and features.

www.java.com/getjava

PDF Reader (Adobe Reader or Apple Preview)

Current versions of Chrome, Firefox, and Safari can display and print PDF files.

get.adobe.com/reader

RealPlayer

www.real.com

NOTE If your institution uses disk image protection software like Deep Freeze or Clean Slate, install software in a safe area of the workstation's disk that will not be overwritten by these utilities.

MORE INFORMATION

MINDTAP

- www.cengage.com/help/mindtap/mt-instructor/

SAM

- www.cengage.com/help/sam/lab-admin
- www.cengage.com/help/sam/instructor
- www.cengage.com/help/sam/instructor-kb

WEBASSIGN

- www.webassign.net/manual/instructor_guide/

CNOWV2

- www.cengage.com/help/cnowv2/instructor

OWLV2

- www.cengage.com/help/owlv2/instructor

PLATFORM STATUS

Check the current status of Cengage learning platforms.
techcheck.cengage.com

TERMS OF USE

[Cengage Terms of Use](#)

PRIVACY POLICY

cengage.com/privacy

MICROSOFT OFFICE

A fully installed Microsoft Office® version is required to complete most MindTap projects.

SAM 2019 Projects

- Windows 8 or later: Microsoft Office 2019/365 Home, Premium, or University
- macOS 10.12 or later: Microsoft Office 365 Home/Premium or Microsoft Office 2019 Home/Student

Not compatible with Microsoft Office Online.

SAM 2016 Projects

- Windows Server 2008 R2 or later: Microsoft Office 2016/365 Home, Premium, or University
- macOS on Intel: Microsoft Office for Mac 2016 Home/Business or Microsoft Office 365 Home, Premium, or University

Not compatible with Microsoft Office Online.

SAM Online Projects

Requires a supported browser and subscription to Microsoft Office Online.

NETWORK TESTING

Student success depends on reliable and fast access to learning materials. Although the results of network testing can vary and are affected by many factors, these tests can help you spot potential problems and troubleshoot issues.

Test Bandwidth

If needed, test the actual download bandwidth from a workstation in the lab.

1. Open a browser and go to www.speedtest.net.
2. Click **Go** to start the test.

Test Media Playback

If needed, use YouTube to test the performance of streaming video from a workstation in the lab.

1. Open a browser and go to www.youtube.com.
2. Play a video.
3. Test with multiple workstations simultaneously.

If you observe problems like delayed playback or pauses, ask your network administrator for help.

If problems with simultaneous playback of multiple videos can't be fixed, consider having students start work at different times to distribute bandwidth usage over time.

Test Route to Server

Get information about the routers and transmission times between a workstation in the lab and a Cengage server.

1. Open a command prompt or terminal window.
2. Type the traceroute command:
 - WINDOWS: `tracert address`
 - MACOS OR LINUX: `traceroute address`
 where *address* is the web address of the service you are trying to reach.

```
tracert sam.cengage.com
tracert to e4037.x.akamaiedge.net, 64 hops max, 72 byte packets
 1  10.14.15.254                2.73 ms  1.44 ms  1.56 ms
 2  10.0.0.1                    1.31 ms  *        2.84 ms
 3  rtp-gw-to-webassign.ncren.net 3.58 ms  3.95 ms  3.90 ms
 4  9-1-3.ear3.washington1.level3.net 10.66 ms  9.58 ms  9.51 ms
```

```
5 a23.static.akamaitechnologies.com 32.20 ms 32.56 ms 32.13 ms
```

- Each numbered row is a hop/router between your computer and the destination address.
 - More than around 18 hops might cause performance problems.
 - Each row lists transmission times for each of the three packets sent as part of the test. Transmission times should not exceed 80-120 ms.
 - An asterisk means that the server did not respond to the request; this is often intentional.
- If the test shows high transmission times or hop counts, ask your network administrator for help.

Test Time to Reach Server

Get information about reachability of a Cengage server from a workstation in the lab.

1. Open a command prompt or terminal window.
2. Type the traceroute command:

WINDOWS: `ping /n 10 address`

MACOS OR LINUX: `ping -c 10 address`

where *address* is the web address of the service you are trying to reach.

```
ping -c 10 sam.cengage.com
PING e4037.x.akamaiedge.net (23.38.114.139): 56 data bytes
64 bytes from 23.38.114.139: icmp_seq=0 ttl=53 time=31.946 ms
64 bytes from 23.38.114.139: icmp_seq=1 ttl=53 time=32.004 ms
64 bytes from 23.38.114.139: icmp_seq=2 ttl=53 time=32.332 ms
64 bytes from 23.38.114.139: icmp_seq=3 ttl=53 time=32.202 ms
64 bytes from 23.38.114.139: icmp_seq=4 ttl=53 time=33.316 ms
64 bytes from 23.38.114.139: icmp_seq=5 ttl=53 time=31.897 ms
64 bytes from 23.38.114.139: icmp_seq=6 ttl=53 time=33.850 ms
64 bytes from 23.38.114.139: icmp_seq=7 ttl=53 time=32.509 ms
64 bytes from 23.38.114.139: icmp_seq=8 ttl=53 time=33.872 ms
64 bytes from 23.38.114.139: icmp_seq=9 ttl=53 time=33.218 ms

--- e4037.x.akamaiedge.net ping statistics ---
10 packets transmitted, 10 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 31.897/32.715/33.872/0.739 ms
```

Round trip times should be less than 120 ms and packet loss should be less than 1%.

If the test shows high round trip times or packet loss, ask your network administrator for help.

SITES TO ALLOW

To ensure that Cengage learning platforms work correctly, the following sites should not be blocked by firewalls. Browsers should also allow cookies and pop-up windows for these sites.

PRIMARY SITES

cengage.com and subdomains of cengage.com such as gateway.cengage.com
 sam.cengage.com
 webassign.net
 cengagenow.com and subdomains of cengagenow.com
 cengage.celebrus.com

SUBDOMAINS OF CENGAGE.COM

gateway.cengage.com
 samcp.cengage.com
 samcpws.cengage.com
 ng.cengage.com
 cnow.apps.ng.cengage.com
 aplia.apps.ng.cengage.com
 college.cengage.com
 static.mindtap.cengage.com
 als.cengage.com
 xcp.cengage.com

ADDITIONAL SITES

cdnjs.cloudflare.com

v2.cengagenow.com

instructor.cengagenow.com and subdomains

Bandwidth shaping and content filtering on the campus network might negatively affect performance. The listed sites should be excluded from bandwidth restrictions or given bandwidth preference.

Also ensure that the standard HTTP/HTTPS Ports (ports 80 and 443) are open.