



Iowa TIER and FAST Technology Requirements

This document is intended to instruct users and technical personnel on the minimum requirements for adequate performance.

Bandwidth Requirements

Minimum required for adequate performance:

- For Iowa TIER: 10 Mbps of available excess bandwidth in the building (for handling the data traffic). This is assuming a rough maximum of 10-15 concurrent Iowa TIER users in the building.
- For aReading assessment: roughly 1 Mbps per computer in a simultaneous lab testing setting.
- When considering bandwidth needs, keep in mind the excess capacity needed is in addition to your normal, daily bandwidth usage.

Not enough bandwidth?

We recognize that a few elementary buildings may struggle to meet the bandwidth requirements. The following recommendations might be helpful in successfully administering these assessments in buildings that do not have the recommended amount of bandwidth:

- Arrange to temporarily increase bandwidth during testing windows, if possible. Consult with your network service provider for options and an analysis of your network and needs.
- Avoid bandwidth-intensive activities that put a strain on your data network, such as streaming videos and updating software.
- Transport students to labs at other buildings with greater bandwidth for group testing.
- Test students in smaller groups.
- Stagger setup and starting of each student testing. Setup first computer and have student begin testing before moving on to setup second computer and having next student begin testing, etc.
- Try using Ethernet wired computers – they may be more reliable than computers using wireless, especially if there are many users on a weaker wireless network.
- The aReading assessment is not required. Screening and progress monitoring requirements can be met with other FAST assessments which require less bandwidth.

NOTE: Please be aware that locations with lower bandwidth reported more performance issues.

Wireless Network Requirements

If testing computers will use wireless network, consider the following:

- The wireless capabilities in these areas. Wireless capacity should be robust enough to handle the bandwidth as described above.
- Number of connections: must be configured with enough connections for all users.
- The distance from a wireless access point. The farther the distance, the weaker the signal.

- How many simultaneous users will be active (including those being assessed, and other users). More traffic equals lowered wireless capacity and bandwidth.

Computer Requirements

The requirements for computers are minimal.

- Performance will be better with newer, faster computers.
- Operating systems (minimum): Windows Vista or Windows 7; Mac OSX.
- Chromebooks are supported
- Screen resolution of 1024 x 768 or above
- Headphones and a mouse – ONLY if using aReading
- iPad performance has not been reliable (slow performance). Use with caution.

Tablets, smartphones and other small-format devices
The Iowa TIER and FAST system have not been certified to support tablet devices. Development work is underway in this area, but please do not count on it until we know the work is completed.

There are no plans to support small-format handheld devices like smart phones.

Browser requirements

- **Current versions** of Firefox and Chrome are supported browsers.
- Within the browser, popup blockers **must be disabled** for FAST and Iowa TIER
- Within the browser, these items **must be enabled**:
 - Javascript/CSS
 - Cookies for FAST and Iowa TIER
 - SSL
 - Adobe Reader for viewing PDFs
 - Adobe Flash (Firefox only - required for audio support)
- Internet Explorer, Safari and other browsers are not supported

Firewall and content filter settings

1. TIER and FAST use a cloud-based architecture, therefore it is recommended to filter by domain rather than IP addresses. If this is an option for your content filters, please add the following domains currently in use:
 - *.fastforteachers.org
 - *.fastbridge.org
 - d2f8p5dd32sgdr.cloudfront.net



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2. These email domains need to be white-listed for communications related to Iowa TIER:
 - iowa.gov
 - edspring.org
 - iowatier.zendesk.com
 - umn.edu
 - the domain for your AEA

3. If a district uses packet shapers, content filters, and/or intrusion detection software, make sure to make allowances for unimpeded passage of traffic to and from the testing sites. Iowa TIER and FAST should be given adequate bandwidth and high priority.