

# Network Troubleshooting Checklist

This checklist will help if districts experience network difficulties.

- Ensure that the CAI URLs are whitelisted on your network's firewall.
  - URLs can be found on page 100 of the Comprehensive Technology Manual.
- To get the list of IP addresses please contact Idaho Help Desk.
- If the entire district's network is malfunctioning, contact your District Network Administrator.
- If networks for multiple schools within a district, an entire school, or multiple classrooms are malfunctioning, contact your School/District Network Administrator.
- Make sure that testing traffic is prioritized on the network vs. other network traffic.
- Attempt to connect to the TDS practice test site.
- Attempt to connect to another website to see if the network is connected.
- Run a Ping test if possible (ping to tds.cambiumast.org, then ping to an IP address to a satellite for the specific project).
- Run a trace route (tracert) to identify where the drops in the network are.
- Verify if a content or web filter is active on the network.
  - If so, temporarily disable it just long enough to test if the issue persists.
- Verify if SSL Decryption is active on the content or web filter.
  - If so, temporarily disable it to test if the issue persists.
- Verify if a network-based antivirus is running.
  - If so, temporarily disable it to test if the issue persists.
- Verify the MTU Packet size configuration on the network.
  - If this size is higher than 1500 bytes temporarily lower the value to 1500 bytes or lower and run a test to see if there are any improvements.
- Verify if the issue persists when using a different network.
  - If the issue doesn't persist, then compare the types of filters and restrictions to the network.
- Verify if the issue persists on a faculty device.
  - If the issue doesn't persist, compare the difference between the faculty and student/testing account. Sometimes, the accounts provisions have different restrictions or rules applied.

**Are multiple classrooms experiencing connection issues (Suggestions for District Networking)?**

- Reset wireless access points in the classrooms or a switch if it is common to the classrooms having the issues.
- If connection issues persist, stagger classroom testing times or test students in smaller groups.

**Are 20–25% of students experiencing connection issues?**

- Verify the number of wireless access points in each room.
- Verify that the number of connected devices does not exceed the capacity of the WAP
- Where are the students having connection problems? Try seating the students slightly closer to the wireless access point and ensure that there is clear line of sight between the students' devices and the WAP.
- Stagger testing times of multiple classrooms or test students in smaller groups.
- Restart all firewalls, WAPs, switches, routers in the school(s). \*Please note this should be done over the weekend or out of school hours.

**Are a few students or one student experiencing connection issues?**

- Try switching devices or try to test on another platform if possible.
- Relocate the student(s) closer to the WAP.
- Test the student on a hardwired connection.
- Verify if any error messages are being shown.
- Reboot the devices.
- Verify that the number of connected devices does not exceed the capacity of the WAP.