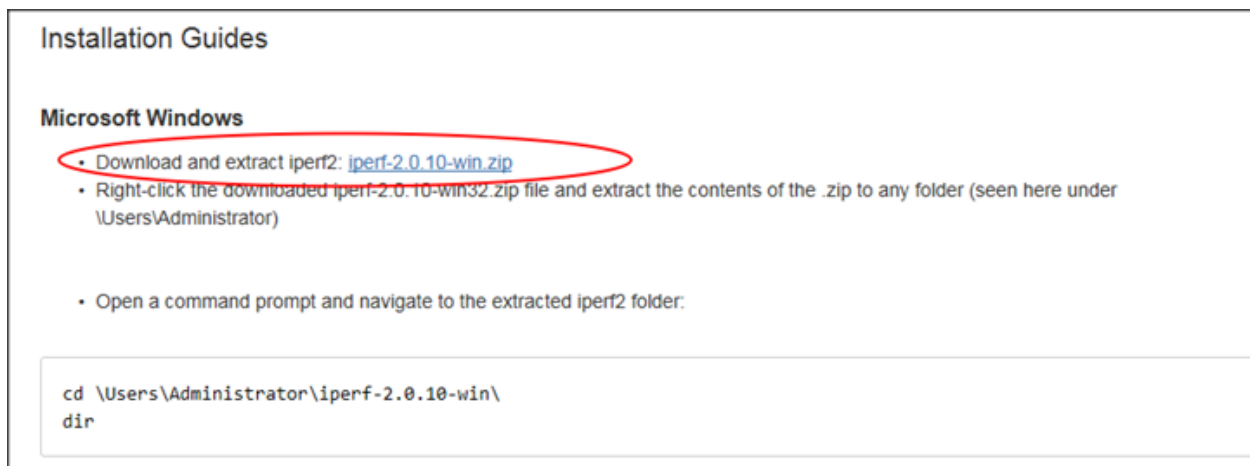This document provides customers with reliable Internet speed tests. The results of the speed tests may be impacted by following variables:

1) Speed testing tool – we recommend you use the iPerf tool to provide you with the most accurate results when operating on BadgerNet
2) Location of your testing on a laptop/PC in the network
3) Time of day when running your test. For example, if you run the test when there is higher traffic on your network, you are going to see slower speeds.

Speed Testing Tools

Most users test their internet connection speeds using online browser based testing against servers that are hosted somewhere on the Internet. For example, http://speedtest.wiscnet.net/ . These tests work fine for users with low bandwidth internet services, but do not scale well for users with high speed internet connections such as BadgerNet. To get an accurate speed test, a different testing tool, like iPerf, should be used.

Any BadgerNet user, whether you are a WiscNet customer or not, can download the iPerf software from: https://confluence.wiscnet.net/display/WPKB/Bandwidth+Testing#BandwidthTesting-WiscNethostedIperf. This page also provides instructions for installing the software and running the speed test. If you scroll halfway down the page you will see the section called "Installation Guides" with details on downloading the software.

Location of testing laptop/PC in the network

Location of testing your PC/Laptop is critical for accurate test results. Note: from the diagram below, location D is the best place to test your Internet speed. The reliability of test results goes down as we move the test point to C, B and A.
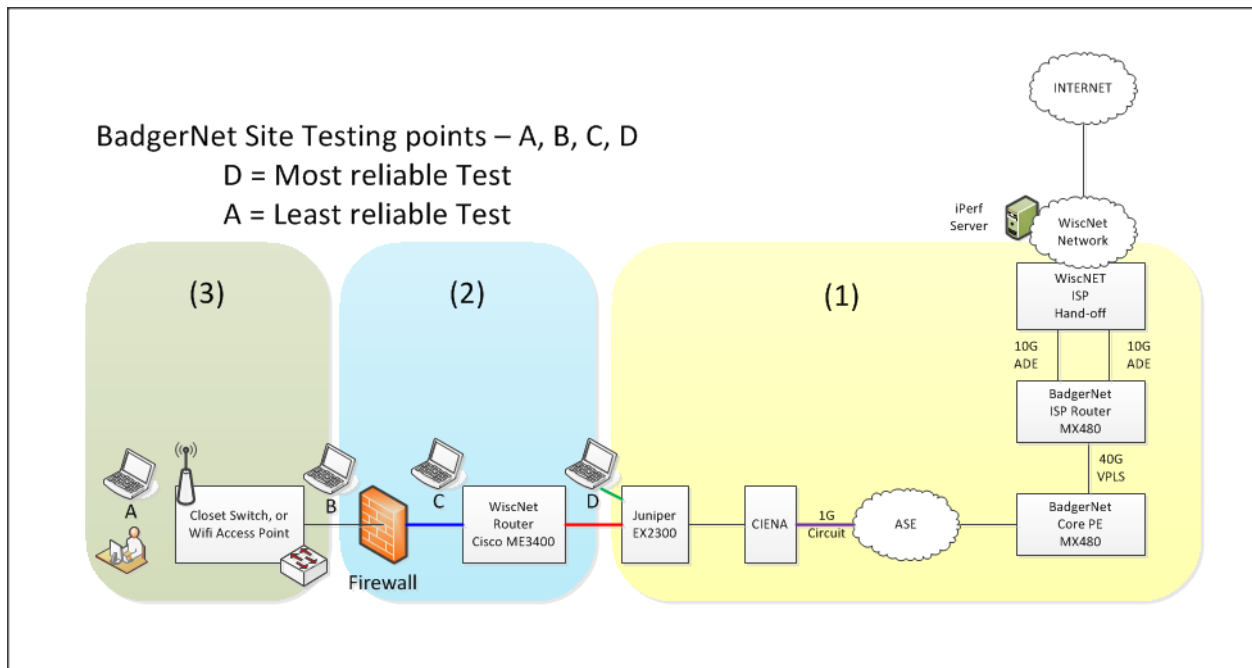
Time of Day

Speed test results can also vary based on time of day, depending on the bandwidth consumed by the site users at the time the tests are run. For example, if a site has a 100 Mbps connection and the users at the site are already consuming 60 Mbps download and 25 Mbps upload sustained bandwidth for their

business use, the test results will only show 40 Mbps download and 75 Mbps upload speeds. Therefore, we recommend users run their tests before or after business hours.

Mid-day Testing

Some users desire to run speed test during business hours to see if they are getting full bandwidth during the day. **Note that an <u>accurate</u> mid-day test with iPerf will be service impacting.** In order to run an accurate test during the day, the user shall coordinate a test window with AT&T and their ISP provider. The test will entail disconnecting the red cable, as shown in the drawing below, and connecting a laptop to the juniper switch at point D, thus effectively isolating the WAN from the site LAN. Disconnecting the red cable will disrupt service for the site users.

Please email TEACH@wisconsin.gov with any questions or concerns.

Thank you,

BadgerNet Team