

FAQ: CAF / A-CAM Speed and Latency Testing Requirements

1. Where can I find the official document outlining all these testing requirements?

Here: <https://docs.fcc.gov/public/attachments/DA-18-710A1.pdf>

2. What Service Providers do these testing requirements apply?

This framework applies to all providers with CAF Phase II, A-CAM, rate-of-return mandatory buildout, RBE, and Alaska Plan obligations.

3. How often do the test have to be done?

Test Quarterly, Report Annually. Testing must be conducted for one week during each quarter of the year. Test results to be submitted once a year to the USAC on July 1st of every year for previous four quarters

Final submission procedure has not been set as of November 15, 2018

4. When do service providers need to start testing?

- a. Testing need to commence Q3 of 2019.
- b. The first performance measures data and certification will be due by July 1, 2020 and shall include data for the third and fourth quarters of 2019. Thereafter, data and certification will be due July 1 each year for all four quarters of the prior calendar year.

5. What constitutes a test?

A test is defined to be a single, discrete observation or measurement of speed or latency conducted from the customer premises of an active subscriber at a CAF-supported location to a remote test server located at, or reached by, passing through an FCC-designated IXP.

A speed test is a single measurement of download and upload of 10-15 seconds duration.

A latency test is performed using a single UDP packet or a group of 3 ICMP or UDP packets sent at the same test. Ping

6. What is the testing procedure?

- a. Testing must be conducted for one week during each quarter of the year. In those weeks, testing must be performed between the hours of 6:00 pm to 12:00 am local time each day, including weekends (testing hours).
- b. For latency testing, a provider must conduct a minimum of one test per minute—sixty tests per hour—for each testing hour. If the consumer load during a latency test exceeds 64 Kbps downstream, the provider may cancel the test and reevaluate whether the consumer load exceeds 64 Kbps downstream before retrying the test in the next minute.
- c. For speed testing, a provider must conduct a minimum of one test per testing hour in each direction (download and upload) and start at the beginning of each test hour. If the consumer load is greater than 64 Kbps downstream for download tests or 32 Kbps upstream for upload tests, the provider may defer the affected test for one minute and reevaluate whether the load exceeds the relevant 64 Kbps or 32 Kbps threshold before retrying the test. This load check-and- retry must continue at one-minute intervals until the speed test can be run or the one-hour test window ends and the test for that hour is canceled.

7. How many test subjects are required? And how are they chosen?

- a. Test subjects for speed testing must be randomly selected from among the provider's active subscribers in each speed tier in each state.
- b. Subscribers for latency testing may be randomly selected from those subscribers being tested for speed at all speed tiers in that state.
- c. The number of consumers to be tested will be based on the number of subscribers at CAF supported locations, with a maximum of 50 randomly-selected subscribers per state per speed tier for speed testing. If number of subscribers is less than 500 then follow the table below to determine the number of subjects (10% with a minimum of 5)
- d. 50 randomly-selected subscribers per state for latency testing.
- e. Test subjects must be randomly selected every two years. So the same subjects can be used for up to 2 years if they remain active subscribers for that tier during that time.

Number of Subscribers at CAF-Supported Locations per State and Service Tier Combination	Number of Test Locations
50 or fewer	5
51-500	10% of total subscribers
Over 500	50

Some examples illustrating how many subjects need to be selected

- A carrier with 2,300 customers subscribed to a single service tier of 10/1 Mbps in one state must test 50 locations in that state, while a carrier providing solely 25/3 Mbps service to over 2,500 subscribers in each of three states must test 50 locations in each state.
- A carrier providing 10/1 Mbps service and 25/3 Mbps service to 100 subscribers each in a single state must test 10 locations for each of the two service tiers—20 locations in total.
- A carrier providing solely 10/1 Mbps service to 30 subscribers must test five locations, and if that carrier is only able to test three CAF-supported locations, that carrier must test two non-CAF-supported locations receiving 10/1 Mbps service in the same state.
- A carrier with 2,000 customers subscribed to 10/1 Mbps in one state through CAF Phase II funding and 500 RBE customers subscribed to 10/1 Mbps in the same state, and no other high-cost support with deployment obligations, must test a total of 50 locations in that state for the 10/1 Mbps service tier.

8. How is compliance measured?

- a. Speed: To comply with the speed standard, a provider's certified test results, for each state and service tier, must show that 80 percent of the upload measurements are at or above 80 percent of the required upload speed and 80 percent of the download measurements are at or above 80 percent of the required download speed.
- b. Latency: To comply with the latency standard, a provider's (excluding high-latency bidders in the CAF Phase II auction) certified test results must show, for each state, that 95 percent or more of all tests of network round trip latency are at or below 100 ms when measured between the customer premises and a remote server that is located at or reached by passing through an FCC-designated IXP (Internet Exchange Point).

9. What are the compliance levels and penalties for non-compliance?

The compliance level is determined by computing the compliance percentage 'X' first and then referencing the table below to determine the level. Non-compliance to result in support reduction and subsequent quarterly reporting instead of yearly.

How to compute X:

- If 70% of the test speed test results comply (30% do not comply). Then $X = 70/80 = 87.5\%$
- If 85% of latency tests comply then X for this case is $85/95 = 89.47\%$

	Qualifying compliance % (X)	Required Quarterly Reporting	Monthly Support Withheld
Full Compliance	X is 100% or more	No	N/A
Level 1	X is between 85 and 100	Yes	5%
Level 2	X is between 70 and 85	Yes	10%
Level 3	X is between 55 and 70	Yes	15%
Level 4	X is less than 55	Yes	25%

10. Where are the FCC-designated IXPs located?

There are 16 IXPs located in the following cities

- New York, NY
- Washington, DC
- Atlanta, GA
- Miami, FL
- Chicago, IL
- Dallas-Fort Worth, TX
- Los Angeles, CA
- San Francisco, CA
- Seattle, WA
- Denver, CO
- Salt Lake City, UT
- St. Paul, MN
- Helena, MT
- Kansas City, MO
- Phoenix, AZ
- Boston, MA

11. What kind of options do Service Providers have for conducting these tests?

Three testing options will be permitted: use of MBA testing; off-the-shelf testing; and provider-developed self-testing or self-testing.

12. How does a service provider outside the continental US do testing?

For providers serving non-contiguous areas more than 500 air miles from the contiguous United States, testing must be conducted from the customer premises of an active subscriber to the point in the non-contiguous area where all mainland traffic is aggregated for transport from the non-contiguous area.

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