

Speedtest Web GUI

The **Speedtest Web GUI** allows you to run speedtest-cli from the IPFire Web GUI and display the results to the screen or to schedule speedtest-cli to run at daily intervals and write the results to a log file. Running regularly scheduled tests allows you to collect historical data on the speed of your internet connection.

Run Speedtest and Display to Screen

Click the *Run Speedtest Now* button to open the run speedtest page. Speedtest can be run multiple times without leaving the page by clearing and restarting the test.

Start Button

Start a test and display the results when finished.

Clear Button

Clear the current results so that you can run another test.

Back Button

Return to the main Speedtest Web GUI page.

Schedule Speedtest to Run and Log to File

The *Schedule Speedtest to Run and Log to File* section of the page allows you to configure speedtest to be run at daily intervals and have the results written to a file for future analysis.

Enable Checkbox

Enable or disable the *Schedule Speedtest to Run and Log to File* feature.

Test Type

Select the type of test(s) to run. The options are 'Both Download and Upload', 'Download Only' and 'Upload Only'.

File Format

Select the output format that speedtest-cli will write to the log file. The options are 'CSV' and 'JSON'.

The log file name is set based on the file format and is displayed to the right.

Times Per Day

Select the number of times per day that you want to run speedtest-cli. The tests will be run at evenly spaced intervals throughout the day.

An estimate of the daily data usage based on an average 420MB per test is calculated and displayed to the right.

Start Hour

Select the start hour for running speedtest-cli.

The next run time is calculated based on the times per day and start hour and is displayed to the right.

Times per day and start hour work together to determine the times that tests will be run.

The start hour can be used to offset the intervals at which you want to run tests. For example, if you want to run one test per day at 8:00 AM, you would select one time per day for the number of tests and 8:00 AM for the start hour. If you increase the number of test to four times per day with the same 8:00 AM start hour, tests will run at 8:00 AM, 2:00 PM, 8:00 PM and 2:00 AM. The run time intervals wrap around the midnight hour. For the example above, if you select a start time of 2:00 PM, 8:00 PM or 2:00 AM you will get the same run intervals as with 8:00 AM selected.

Use Start and End Dates

If you want to run a time limited series of tests, you can select start and end dates for a window of time that you want to study by checking the *Use Start and End Dates* box and entering the dates for the window.

Select Server

By default, speedtest-cli will automatically select a server to use when running a test. If there is a specific server that you would like to use for all tests, you can select it from the dropdown. The options shown in the dropdown are from a *speedtest-cli -list* command.

One thing to keep in mind if you decide to select a specific server is that if the server that you select is not available at the time a test is run, the test will fail.

Status

This box displays the last time the settings file was changed and the size and number of records for the current logfile. A list of all speedtest logfiles in `/var/log` is also included.

Last 10 Log Records

This box displays the last 10 records of the log file. The display area may be resized vertically. A blank space is added between records for readability.

How Speedtest Web GUI Works

Configuration information is written to the settings file by the `speedtest.cgi` web page. `runspeedtest.pl` is called from `fcron.hourly` to run tests. The user `speedtest` is created by the installation script and is used to run `speedtest-cli`.

`/var/ipfire/speedtest-webgui/settings`

The `speedtest.cgi` web page writes the configuration settings to this file. `runspeedtest.pl` reads the file to determine when to run tests.

`fcron.hourly`

The installation script creates a link in `fcron.hourly` to run `runspeedtest.pl`.

`speedtest` user

The installation script creates a `speedtest` system user with no password, home directory `/var/empty` and shell `/bin/false`. The `runspeedtest.pl` script does a `su` to the `speedtest` user when running `speedtest-cli`.

`runspeedtest.pl`

The `runspeedtest.pl` script reads the configuration file and determines whether or not it's time to run a test. If it's time to run a test, `runspeedtest.pl` does a `su` to the `speedtest` user to run the test, collects the results and writes them to the log file. When a test is run, `runspeedtest.pl` writes an informational system log record with a `runspeedtest:` prefix.

When run from the command line, `runspeedtest.pl` will show how the intervals and runtimes are calculated and the arguments that are generated to run the test.

`/usr/lib/speedtest-webgui`

The installation script writes the Speedtest Web GUI files to this directory.