Barometer of fixed internet connections in Thailand

Year 2018

Publication of

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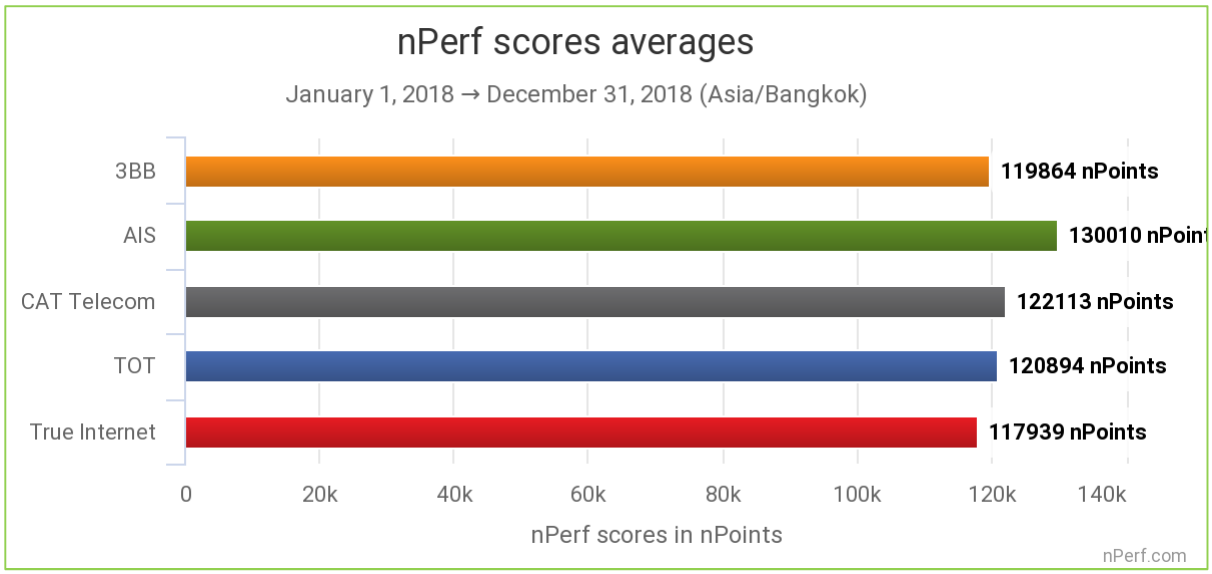
Content

1 Summary of global annual results

1.1 nPerf score, all technologies combined



The highest value is the best.

AIS, the best fixed Internet performances in 2018.

1.2 Our analysis

In 2018, nPerf users have performed **8 237 462** connection tests on Thailand's five largest ISPs. Since January 2018, nPerf has set up a new methodology to rank the ISP's. As we proceed for mobile networks we calculate a score that takes into account download, upload throughputs and latency results. Download throughputs counts for 2/3 of the score. This new methodology explains why there is so many changes in our ranking. We do believe that a good service can't be based just only on download speed but it must includes upload speed and latency.

Download average speed has increased of 46% and reached 53 Mb/s in 2018.

Upload average speed has increased of 70% and reached 26 Mb/s.

AIS best network global performance in 2018

AIS dominates the market in terms of performances on fixed Internet connections thanks to its first place on latency results and through very good download speed results.

CAT best upload speed

Too bad for CAT Telecom. Despite an excellent upload speed at 39,56 Mb/s far ahead its competitors (the second, 3BB, reaches only 30,22 Mb/s) he only reach the second place in our ranking.

3BB Best download speed in 2018

As in 2017, 3BB offers the best download speed in the country. Unfortunately, the ISP is penalized with its results in Latency and upload speed.

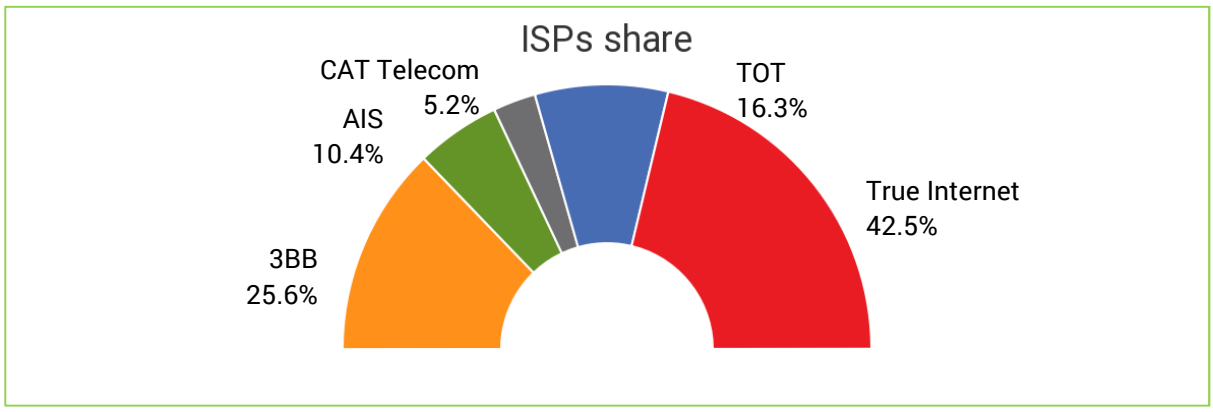
2 Overall results, all technologies combined

2.1 Data amount and distribution

From **January 1, 2018** to **December 31, 2018** we counted 8 237 462 tests, distributed after filtering as follows:

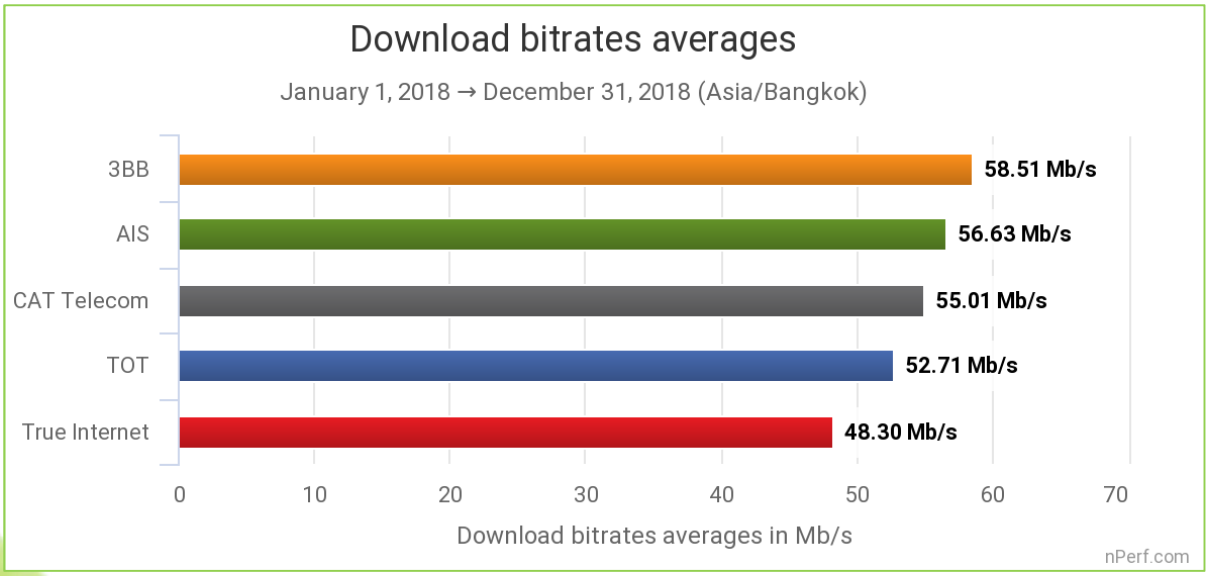
Country	Tests
Thailand	**6 068 354**

Breakdown of tests by provider



2.2 Download speed

In 2018, the average download speed in Thailand was 53 Mb/s.

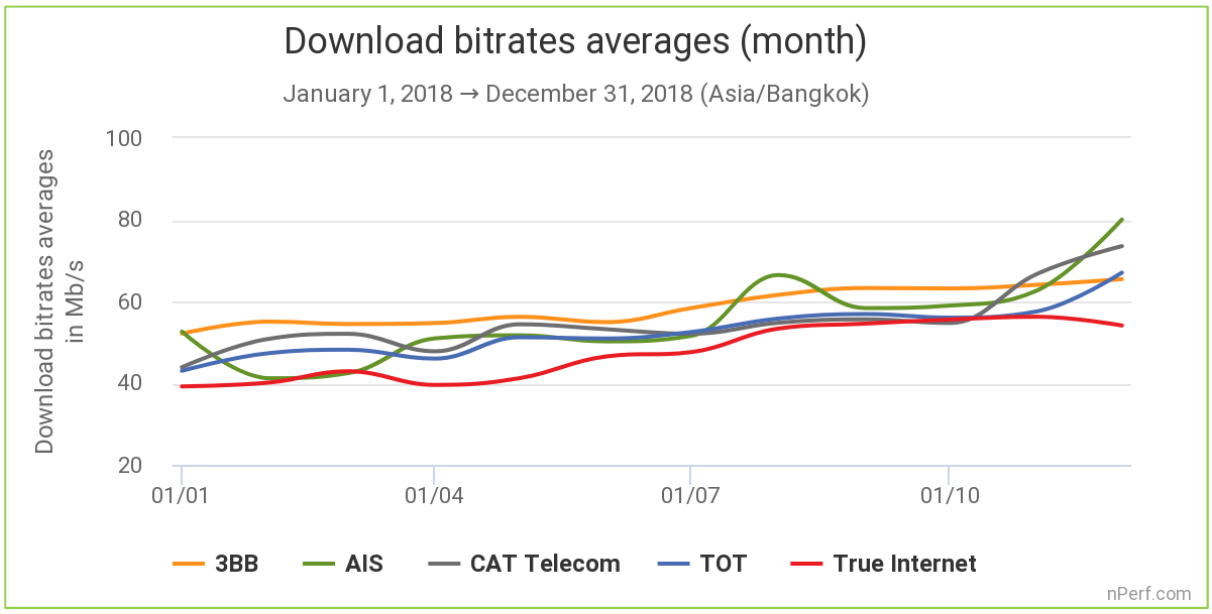


The highest value is the best.

All technologies combined, **3BB** has offered the best download speed to its subscribers in 2018.

On average, ISP's increased by 46% their download speed rate compared to 2017.

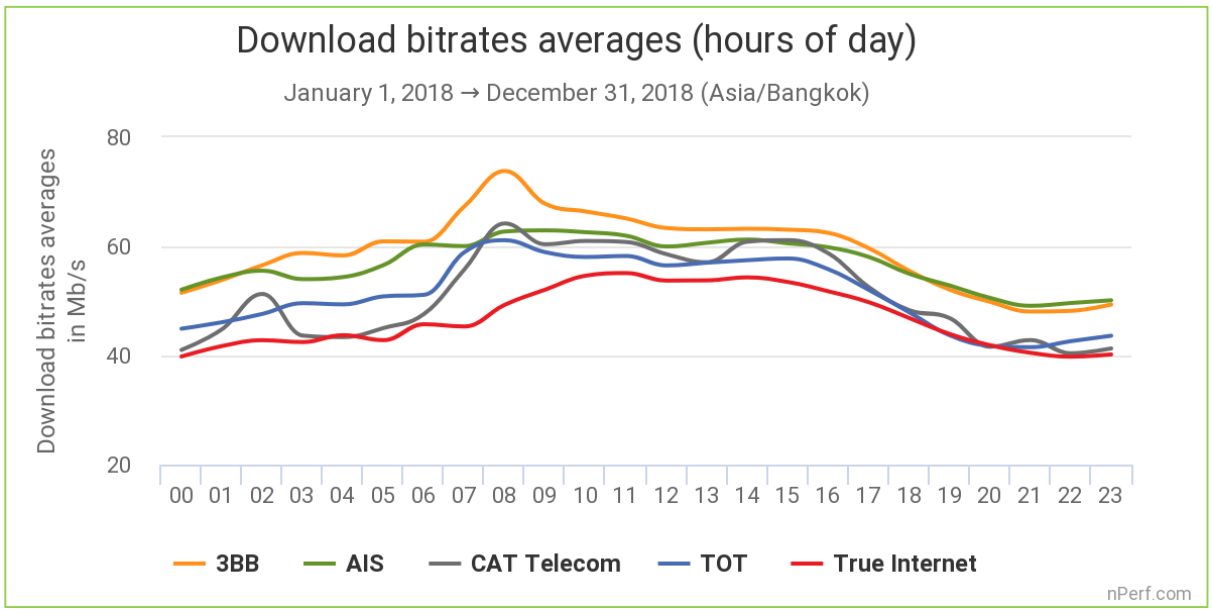
AIS and CAT Telecom have made the most progress on this indicator, respectively +26 Mb/s and +23 Mb/s.



The highest value is the best.

Above graph illustrates the ability of providers to maintain a constant download speed over the period regardless of network load (number of connected clients).

All ISPs have significantly improved their download throughput during the year.

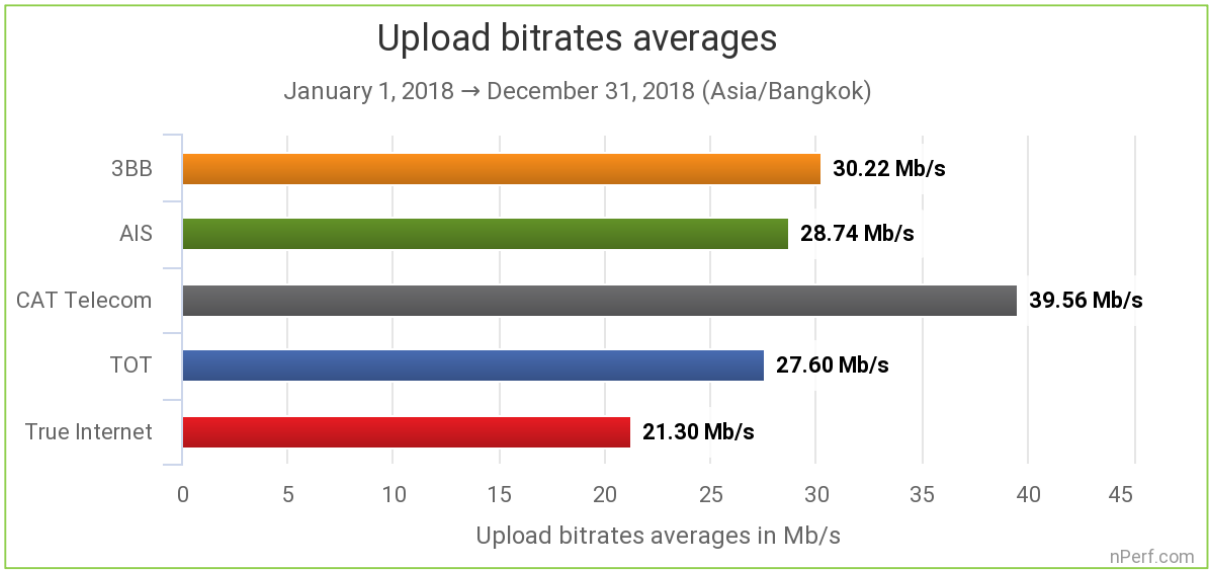


The highest value is the best.

This graph illustrates the ability of providers to ensure a constant download speed during the day, regardless of network load (number of connected clients. We note for all operators a significant decline in download speed late in the day.

2.3 Upload speed

In 2018, the average upload speed in Thailand was 26 Mb/s.

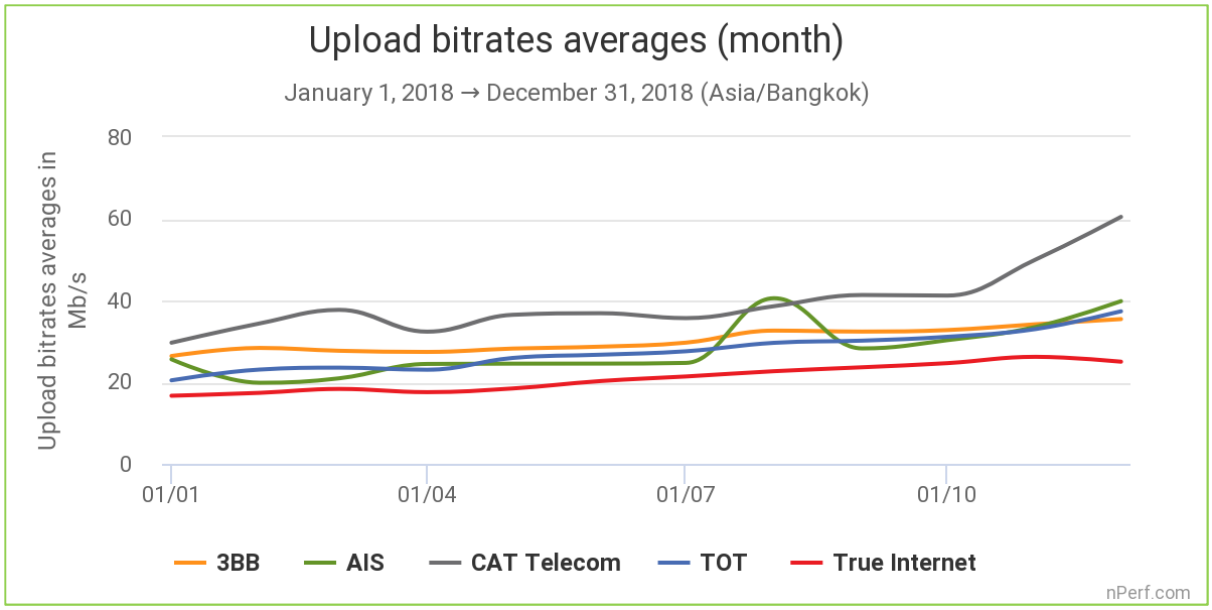


The highest value is the best.

All technologies combined, **CAT Telecom** has offered the best upload speed to its subscribers in 2018.

On average, ISP's increased by 70% their upload speed rate compared to 2017.

AIS and CAT Telecom have made the most progress on this indicator, respectively +15 Mb/s and +23 Mb/s.



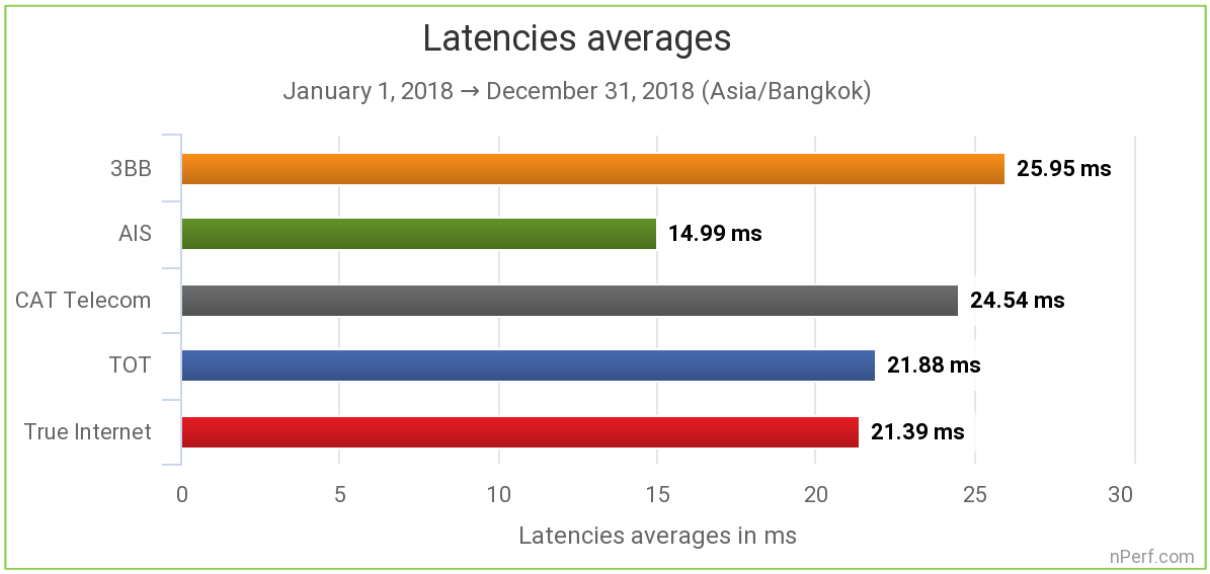
The highest value is the best.

Above graph illustrates the ability of providers to maintain a constant upload speed over the period regardless of network load (number of connected clients).

All ISPs have significantly improved their upload bitrate throughout the year.

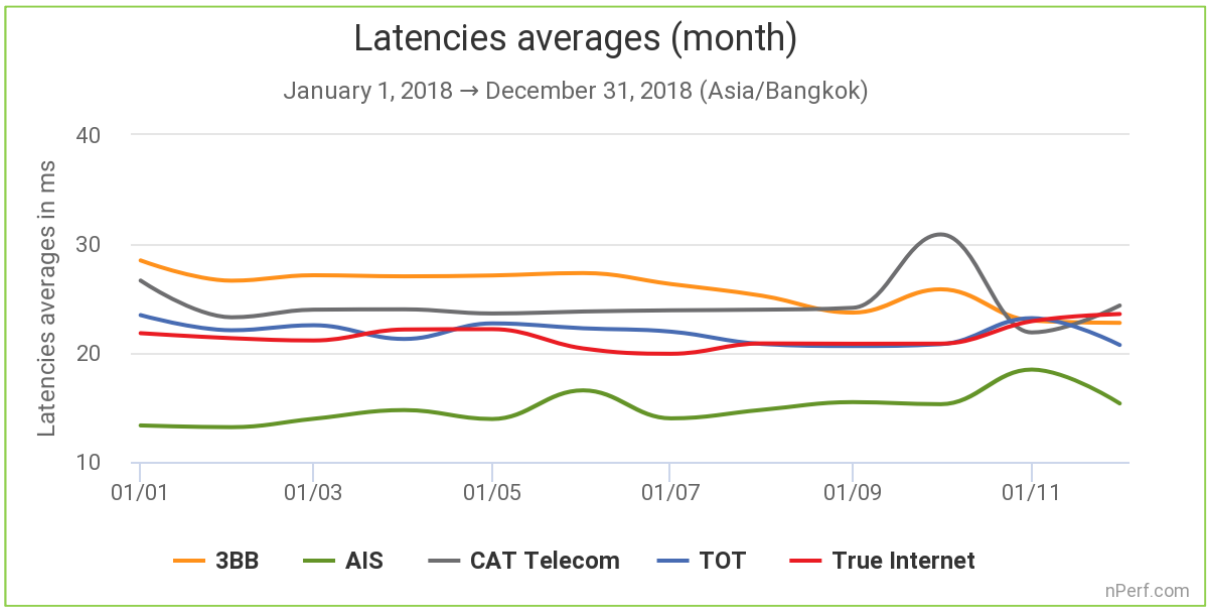
2.4 Latency

In 2018, the average latency in Thailand was 22 ms.



The lowest value is the best.

All technologies combined, **AIS** has offered the best average latency to its subscribers in 2018.



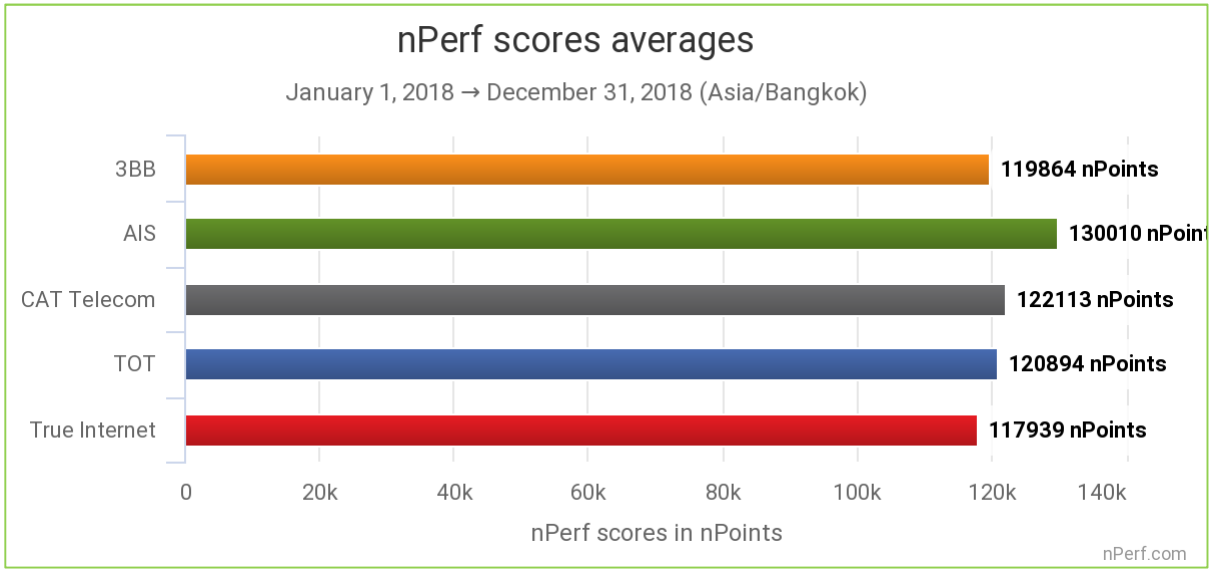
The lowest value is the best.

This graph illustrates the ability of providers to maintain a constant latency during the period, regardless of network load (number of connected clients).

2.5 nPerf score, all technologies combined

The nPerf score, expressed in nPoints, gives an overall picture of the quality of a connection. It takes into account measured bitrates (2/3 Download + 1/3 Upload) and latency. These values are calculated on a logarithmic scale to better represent the perception of the user.

Thus, this score reflects the overall quality of the connection for mainstream consumer use.



The highest value is the best.

AIS, the best fixed Internet performances in 2018.

3 Methodology

3.1 The panel

nPerf offers an Internet speed test application, which can be used for free at www.nPerf.com.

Everyone is free to use nPerf to measure the speed of their Internet connection. All users of the nPerf application form the panel of this study.

In addition, the results from the nPerf speed tests integrated on our partner websites are also included in the panel.

Thus, the nPerf study is based on thousands of tests, making it the study with the largest panel in Thailand.

3.2 Speed and latency tests

3.2.1 Objectives and operation of the speed and latency test

The purpose of the nPerf Speed Test is to measure the maximum capacity of the data connection in terms of data rates and latency.

To achieve this, nPerf establishes multiple connections simultaneously to saturate the bandwidth to accurately measure it. The speed used for the barometer is the average speed measured by the application.

Speed measurements thus reflect the maximum capacity of the data connection. This rate may not be representative of the user experience experienced during normal use of the Internet, as it is measured only on nPerf servers.

The measured bit rate can be impacted by the quality of the user's local network, especially since the expected flow is high. Thus, for an optical fiber internet connection, a local WiFi or Power-Line connection can greatly reduce performance. However, since these constraints are identical to all market operators, they do not bias the comparison. In addition, the user is made aware of these constraints and invited to use a wired local connection for testing very high speed.

3.2.2 nPerf servers

To ensure maximum user bandwidth at all times, nPerf relies on a network of servers dedicated to this task.

These servers are located with hosts in Thailand and abroad. nPerf has also installed dedicated servers directly at Thai providers 3BB, AIS, TOT and True Internet to maximize measurement reliability.

The total bandwidth available for Thailand is greater than 350 Gb/s !

3.3 Filtering of test results

The results obtained are subject to automatic and manual checks to avoid duplication and to rule out possible abusive or fraudulent use (massive tests, robots ...).

Tests performed on cellular connections (2G, 3G, 4G) are also excluded from this barometer.

4 You too, participate in the nPerf panel!

To participate in the panel, simply test your connection on the website www.nperf.com. For mobile Internet, you can also use the nPerf app, available for free on the Apple AppStore for iPhone and iPad, on Google Play for Android devices and on the Windows Store for Windows Phone and Windows Mobile devices.

5 Custom analysis & contact

Do you need further study or want to get the raw data, punctually or automatically, to compile it yourself?

You can contact nPerf via www.nPerf.com "Contact Us" section or directly from the mobile app.

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