

Barometer of fixed internet connections in Thailand



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First half of 2019



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1 Summary of results

1.1 Summary table and nPerf score, all technologies combined

nPerf barometer summary table - S1 2019
Fixed Internet connections in Thailand



	3BB	AIS	CAT Telecom	TOT	TRUE Internet
Download speed	101.18 Mb/s	87.68 Mb/s	62.43 Mb/s	74.41 Mb/s	70.16 Mb/s
Upload speed	90.64 Mb/s	51.41 Mb/s	49.00 Mb/s	44.73 Mb/s	35.36 Mb/s
Latency	18.60 ms	16.82 ms	25.32 ms	18.14 ms	19.06 ms

nPerf Score	3BB	AIS	CAT Telecom	TOT	TRUE Internet
	★ 143 778 nPoints	139 113 nPoints	125 168 nPoints	133 896 nPoints	130 122 nPoints

3BB subscribers enjoyed the best fixed Internet performance in the last semester.

1.2 Our analysis

In the last semester, nPerf users have performed **5.274.332** connection tests on Thailand's five largest ISPs.

Download average speed has increased of 55% and reached 84 Mb/s in the last semester.

Upload average speed has increased of 120% and reached 60 Mb/s in the last semester!

3BB subscribers enjoyed the best fixed Internet performance in the last semester.

3BB dominates the market in terms of performances on fixed Internet connections thanks to its first place on download and upload speed results and a good latency.

AIS, best latency

AIS provided the best latency of the country to its subscribers, their gamers will be happy!

AIS and True Internet not far behind

AIS and True Internet have significantly improved their performance since March and are getting closer to the current leader, 3BB. A beautiful battle is coming !

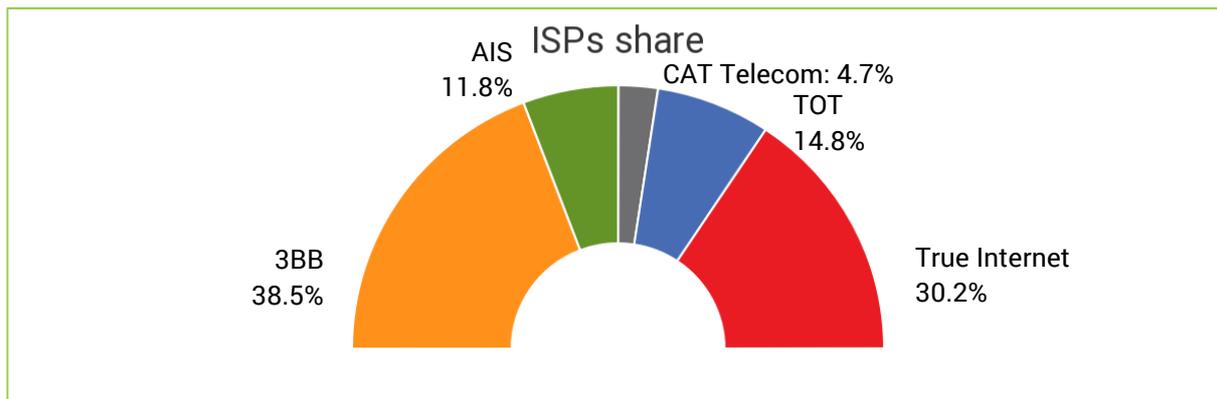
1 Overall results, all technologies combined

1.1 Data amount and distribution

From **January 1, 2019** to **June 30, 2019** we counted **5.274.332 tests**, distributed after filtering as follows:

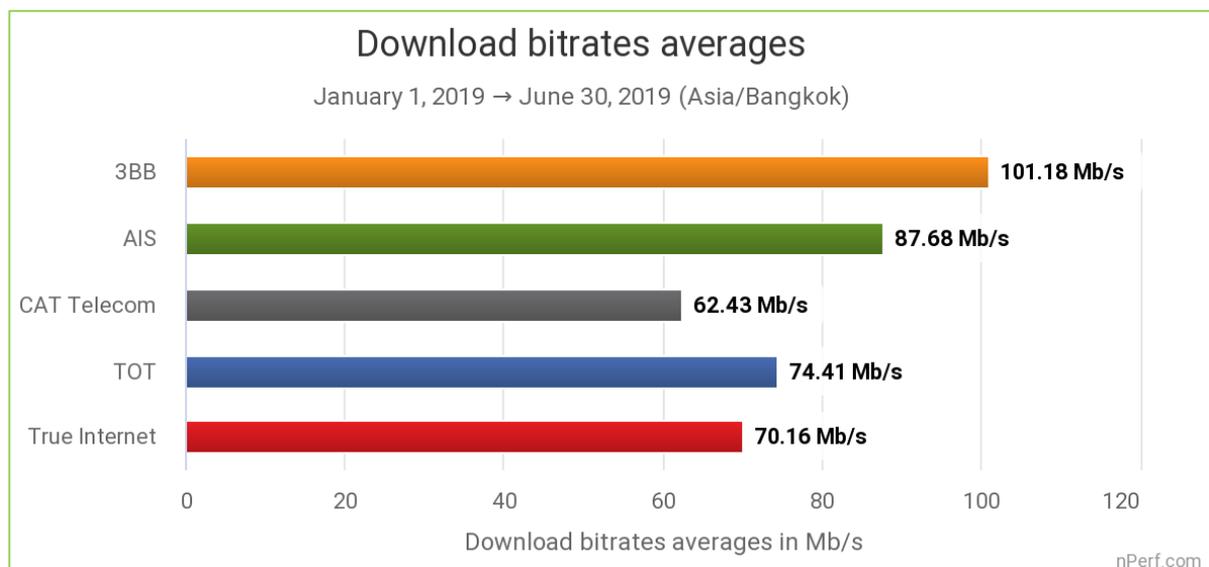
Country	Tests
Thailand	4 016 886

Breakdown of tests by provider



1.2 Download speed

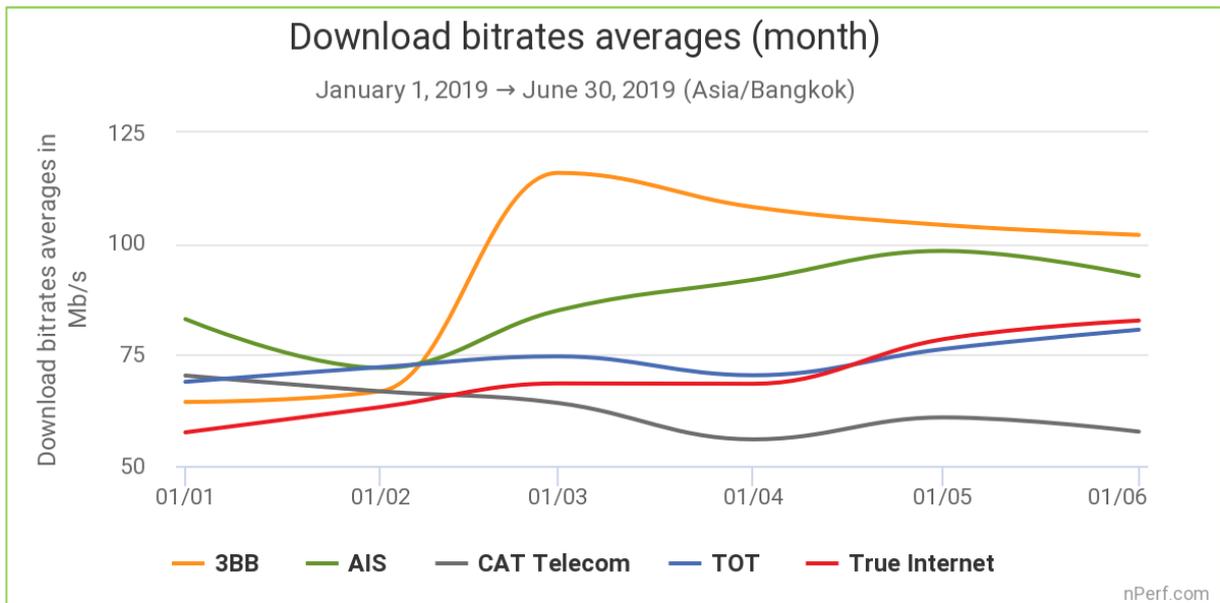
In the last semester, the average download speed in Thailand was **84 Mb/s**.



The highest value is the best.

All technologies combined, **3BB** subscribers benefited from the best fixed internet download speed in the last semester.

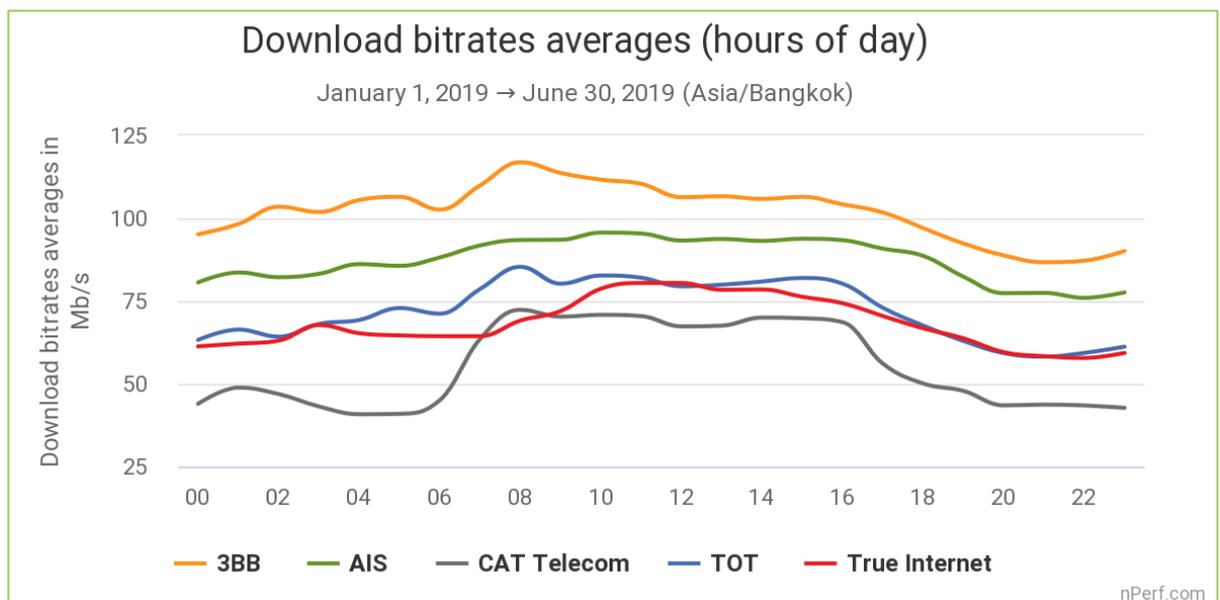
On average, ISP's increased by 55 % their download speed rate compared to 2018!



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).

3BB and AIS have made the most progress on this indicator, respectively +43 Mb/s and +31 Mb/s.

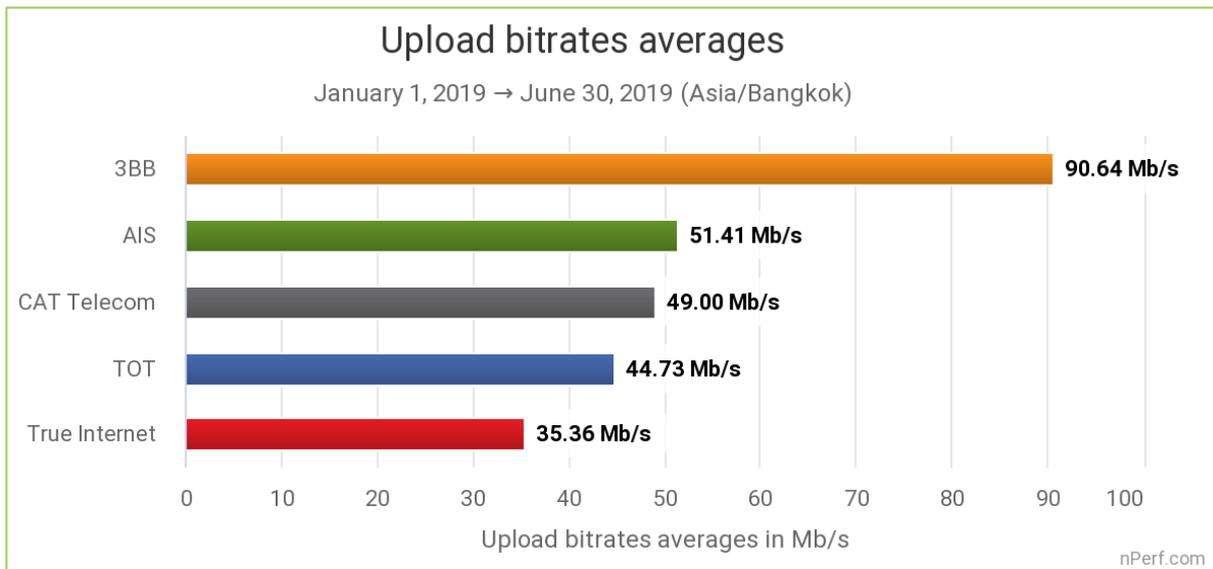


The highest value is the best.

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.

1.3 Upload speed

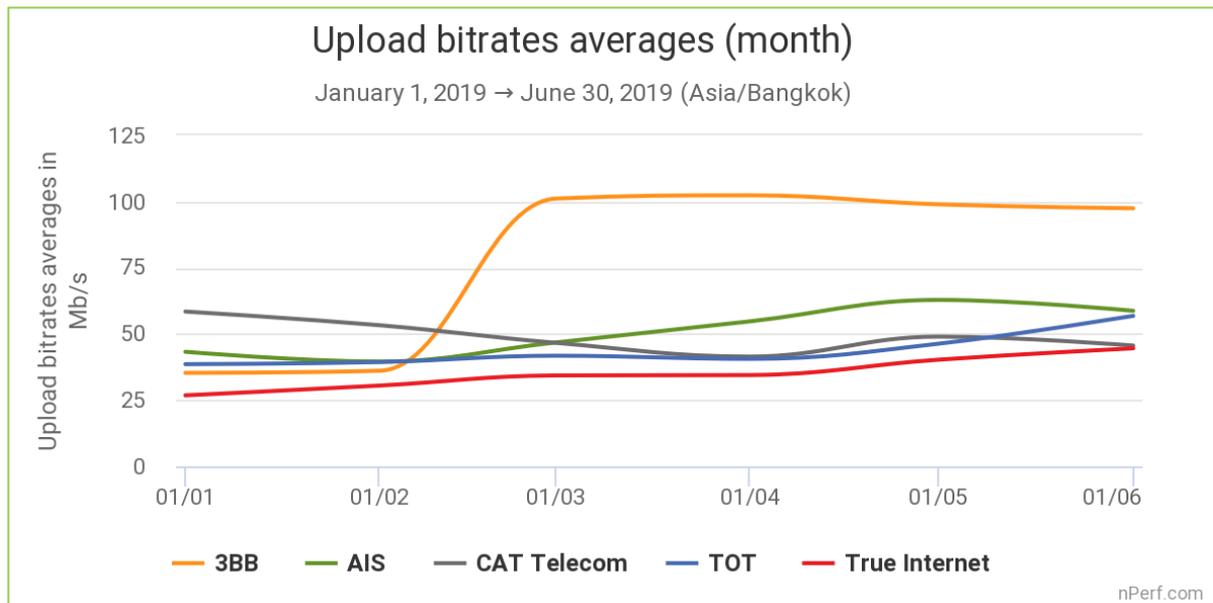
In the last semester, the average upload speed in Thailand was 60 Mb/s.



The highest value is the best.

All technologies combined, **3BB** subscribers benefited from the best fixed internet upload speed in the last semester.

On average, ISP's increased by 120% their upload speed rate compared to 2018!



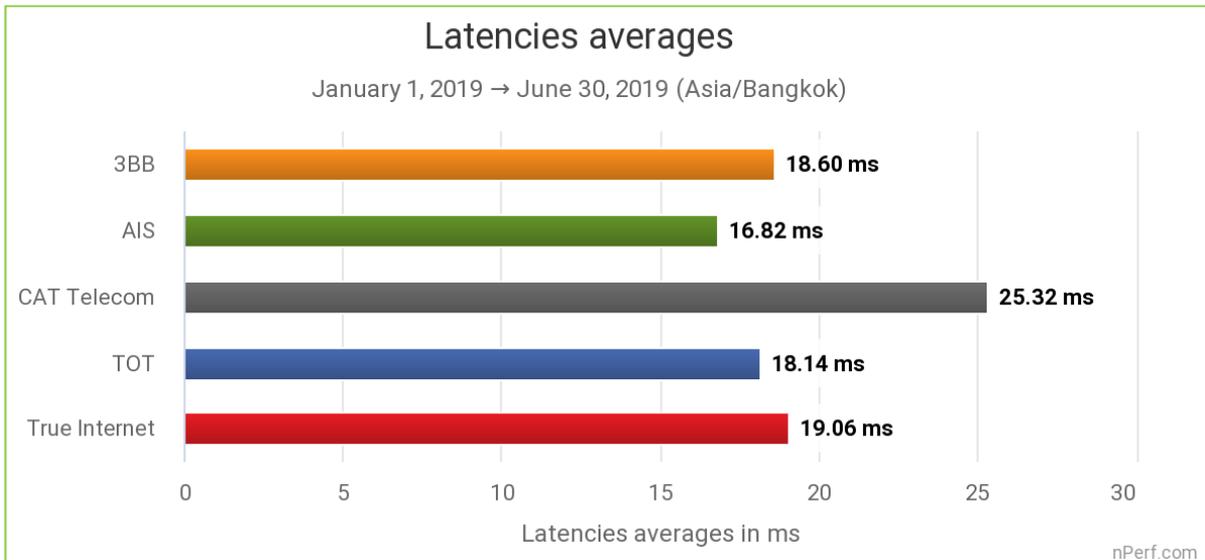
The highest value is the best.

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

3BB and AIS have made the most progress on this indicator, respectively +60 Mb/s and +23 Mb/s.

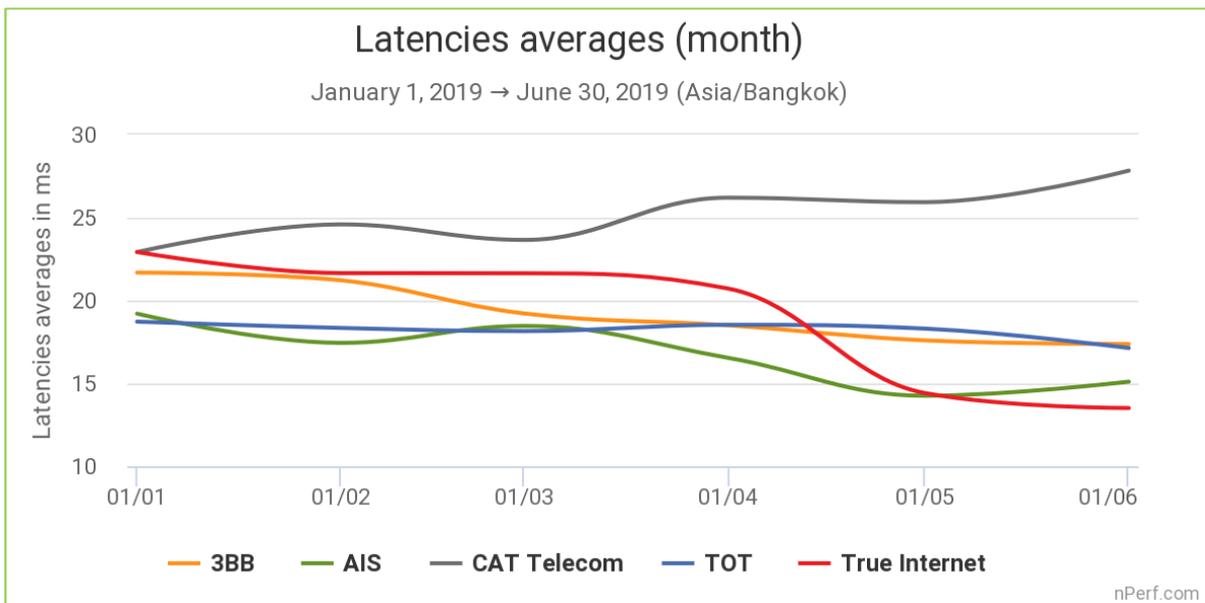
1.4 Latency

In the last semester, the average latency in Thailand was 19 ms.



The lowest value is the best.

All technologies combined, **AIS** subscribers benefited from the best average latency in the last semester.



The lowest value is the best.

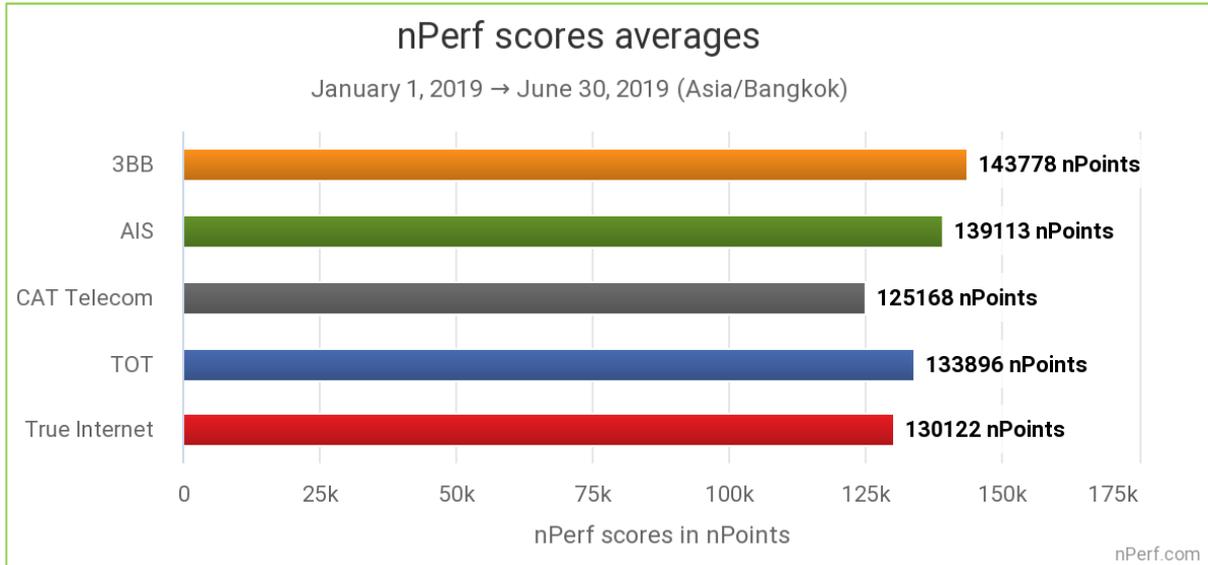
This graph illustrates the ability of providers to maintain a constant latency during the period, regardless of network load (number of connected clients).

All latencies of ISPs converged around 16 ms at the end of the first semester except for CAT Telecom which seems in troubles on this indicator.

1.5 nPerf score, all technologies combined

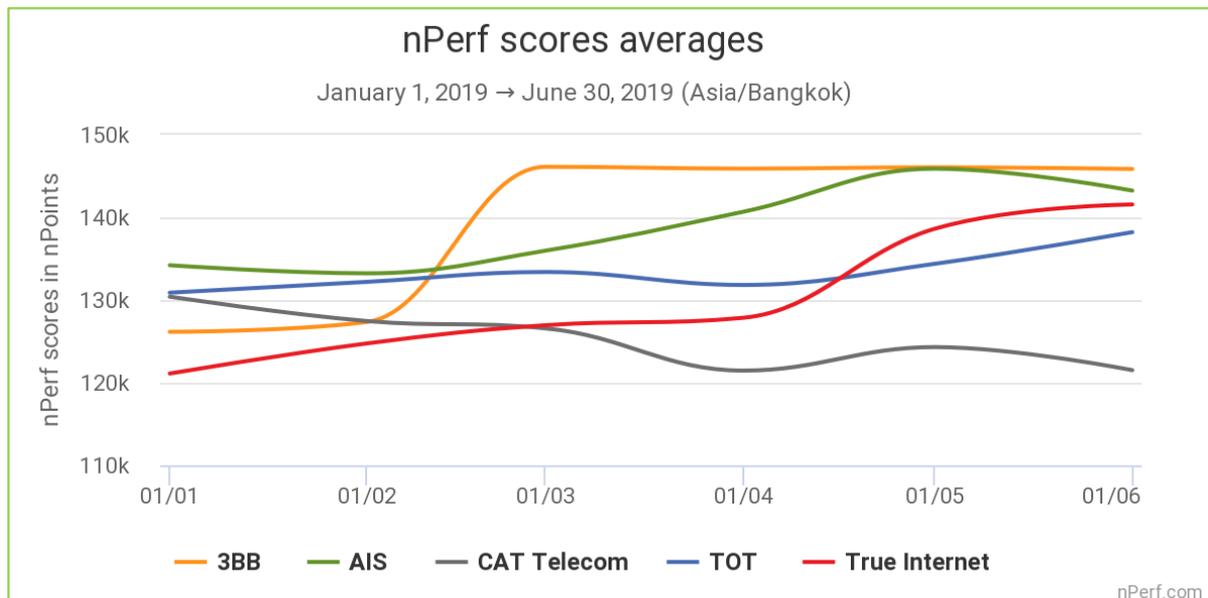
The nPerf score, expressed in nPoints, gives an overall picture of the quality of a connection. It takes into account measured bitrates (2/3 Download + 1/3 Upload) and latency. These values are calculated on a logarithmic scale to better represent the perception of the user.

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



The highest value is the best.

3BB subscribers enjoyed the best fixed Internet performance in the last semester.



We note that **AIS** and **True Internet** have significantly improved their performance since March and are getting closer to the current leader, 3BB.

2 Methodology

2.1 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.

2.2 Speed and latency tests

2.2.1 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.

2.2.2 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! and that for the world is greater than **3.5 Tb/s** with more than **900** active nPerf servers!

2.3 Statistical accuracy

With regard to the total volume of unit tests, the statistical precision used in this publication is:

- ✓ 1% for absolute values

If, for a given indicator, one or more operators have results very close to the best, in the confidence interval defined above, these will be share first place.

2.4 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.

3 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.

4 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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Stay in touch with us, follow us!

