ARCEP QoS Code of Conduct Annexe

Team Ookla - November 17, 2021 21:14

Download and Upload Speeds

Measurement protocol	Ookla has developed and implemented a proprietary Speedtest server and test protocol, utilizing both TCP and UDP, which is now the default mechanism used by all applications. We still maintain a legacy fallback to HTTP tests in instances where a TCP test will be unsuccessful.
TCP or UDP port used	8080, 5060
Number of connections used simultaneously during the speed test	This is test dependent, there is the capacity to manually select a single connection test. However in a dynamic environment the number of connections can scale to meet demand. The minimum is 4 with scaling running to as many as 16 X 4 servers in the multi server testing environment.
Length of each test (provided the volume threshold has not been reached)	15 Seconds Download + 15 seconds Upload, we use a stable stop rather than a data cap as outlined in the below point.
Maximum volume of data exchanged	There is no maximum data volume cap. However, in order to reduce the duration of the test and avoid consuming unnecessary data, the application implements an algorithm designed to end the test early if little to no variance in the measured bandwidth is noticed.
Speed test stream encryption	The Web based test uses HTTPS with TLS v1.2. The mobile, desktop and embedded applications use a proprietary encryption algorithm.
Information on whether or not slow start has been removed	Yes, our test methodology takes consideration of slow start and uses the peak sustained throughput measurement
Version of the Internet Protocol (IP) and selection method used	Both IPv4 and IPv6 are supported.

Explanations of the displayed indicators	Download Upload

Latency

Measurement protocol	A single measurement is taken by measuring the elapsed time between sending a short 22 bytes long message and receiving a response of the same size. The latency test stage repeats this process 10 times. The measurement with the lowest value is displayed to the user as the final latency measure.
TCP or UDP port used	The application establishes a TCP connection to the server, and exchanges some initial handshake traffic to ensure the connection is functional and minimally warmed up. On tests from web clients, multiple methods are used to establish a connection, using different combinations of protocol and port. If the connection cannot be established within 3 seconds, the application will attempt connecting using the next protocol and port combination, leaving the previous connections open, until any connection succeeds. The succeeding protocol and port combination is then used for the Latency stage. The protocol and port combinations used in sequence are: 1. WSS (websockets) port 8080 (or default server port) 2. WSS (websockets) port 5060 (or alternate server port) 3. HTTPS port 8080 (or default server port) 4. HTTPS port 5060 (or alternate server port)
Number of latency unit tests (if overall time-out has not expired)	10
Number of bytes typically exchanged for each latency unit test	22 bytes
Length of the time-out in seconds, for each latency unit test	3 seconds for all platforms except on the web. 20 seconds on the web.
Length of the time-out in seconds, for all latency test	There is no timeout for the entire latency stage. If a single measurement times out, the stage fails.

Latency test stream encryption	The Web based test uses HTTPS with TLS v1.2. The mobile, desktop and embedded applications use a proprietary encryption algorithm.
Version of the Internet Protocol (IP) and selection method used	Both IPv4 and IPv6 are supported.
Explanations of the displayed indicators	Download: During a download test, the application requests data from one or several servers and measures the amount of bytes received per unit of time. On Web and Mobile clients, the user has the option to test using a single TCP connection or using multiple TCP connections. In all other platforms, the application always uses multiple TCP connections. Upload: During an upload test, the application sends data to a single server and the server measures and reports back the amount of bytes per unit of time received. At present we are non-compliant with one of the robustness criteria "**display the median latency of the unit tests conducted"** this change is currently road mapped for delivery in the 2nd half of 2021. It forms a part of a number of methodology changes where we will be swapping to Median from Mean in a coordinated manner.

Web Browsing

List of the URLs of the websites used	N/A
Length of the time-out in seconds, for each web browsing unit test	N/A
Length of the time-out in seconds, for all web browsing tests	N/A
Web cache status	N/A
Explanations of the displayed indicators	N/A

Video Streaming

Video platforms tested and resolutions (if the resolution is set in advance)	Adaptive bitrate streaming is conducted, with available renditions of 240p, 360p, 480p, 720p, 1080p, 1440p, and 2160p. The test protocol also forces testing these fixed renditions up to 2160p should the adaptive bitrate stage fail to reach 2160p.
Number of videos tested and selection method	A single CDN-hosted video is used. Renditions of 240p, 360p, 480p, 720p, 1080p, 1440p, and 2160p are used with a 2 second chunk size.
Length of each video test	16s adaptive bitrate, 5s fixed rendition.
Length of the time-out in seconds, for each video streaming unit test	Adaptive: 30 second start timeout, 26 second timeout (16 seconds video + 10 seconds max stall) Fixed: 5 second start timeout, 10 second timeout (5 seconds video + 5 seconds max stall)
Explanations of the displayed indicators	**Time to first frame** (timeToFirstFrameMs): the amount of time between the user tapping play and the first frame being displayed **Buffering percentage**: the percentage of elapsed time spent re-buffering, defined as: bufferingPercentage = stallMs / elapsedMs **Maximum resolution**: the highest resolution achieved during all stages of the test.

Other Information

Generic information given to users on factors that might influence the different measurements, notably speed, web browsing and video streaming	We have often published content on using the speedtest service as an indicator to troubleshoot networking issues. Here is a link to some content: https://www.speedtest.net/fr/about/knowledge/faq#factors https://www.speedtest.net/fr/help https://www.speedtest.net/fr/about/knowledge/guides https://www.speedtest.net/insights/blog/work-from-home-learn-remotely-setup/
Type of background tests performed	Collection of passive signal metrics performed on an opt in only basis. These are uploaded only once the user connects to a wifi connection.

Test Servers

The three examples given in the table are provided solely for the purpose of illustration.

Method for selecting the default test server	Speedtest applications determine the most favorable servers to test to. The goal is to determine one or several servers that will yield the most accurate result. This means representing the best performance, in both latency and bandwidth, of the connection of the device to the Internet. The automatic server selection process adheres to the following steps: 1. the configuration step returns a list of at least 10 servers, based on the device location 2. the application performs latency tests to a each server 3. the servers are sorted by increasing latency 4. the server with the lowest latency is selected for the test. For a multi-server download test, the 4 servers with the 4 lowest latencies are used

Sponsor (optional)	City	Region	IPv4/IPv6 protocol	Connection capacity	Port used	TCP congestion protocol (optional)	Host name
LaFibre.info	Lyon	Auvergne-Rhône-Alpes	IPV4 + IPV6	>1GBPS	8080, 5060		lyon.lafibre.info
TestDebit.info	Massy	Île-de-France	IPV4 + IPV6	>1GBPS	8080, 5060		massy.testdebit.info
Via Numérica	Archamps	Rhône-Alpes	IPV4 Only	>1GBPS	8080, 5060		speedtest01.via-numerica.net
LaFibre.info	Douai	Hauts-de-France	IPV4 + IPV6	>1GBPS	8080, 5060		douai.lafibre.info
TestDebit.info	Marseille	Provence-Alpes-Côte d'Azur	IPV4 + IPV6	>1GBPS	8080, 5060		marseille.testdebit.info
Orange	Marseille	Provence-Alpes-Côte d'Azur	IPV4 Only	>1GBPS	8080, 5060		speedtest.13webhosting.com
ONLINE S.A.S.	Vitry-sur-Seine	Île-de-France	IPV4 Only	>1GBPS	8080, 5060		st1.online.net

Ikoula	Reims	Grand Est	IPV4 + IPV6	>1GBPS	8080, 5060	reims.testdebit.info
fdcservers.net	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	lg.par-c.fdcservers.net
DFOX	Nice	Provence-Alpes-Côte d'Azur	IPV4 + IPV6	>1GBPS	8080, 5060	62.210.85.110
HarryLafranc	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speed1.harrylafranc.fr
Asthriona	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	sp1.asthriona.com
Tuto-Craft	Strasbourg	Alsace	IPV4 Only	>1GBPS	8080, 5060	speedtest.nsa.ovh
Rocho DataCenter	Chambéry	Auvergne-Rhône-Alpes	IPV4 + IPV6	>1GBPS	8080, 5060	speedtest.rochodc.com
Ozone	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	sp1.as30801.net
Vialis	Strasbourg	Alsace	IPV4 Only	>1GBPS	8080, 5060	testdebit.vialis.net
SFR	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest.mire.sfr.net
Vialis	Woippy	Grand Est	IPV4 Only	>1GBPS	8080, 5060	bpwoippy.vialis.net
RIV54	Saulnes	Grand Est	IPV4 Only	>1GBPS	8080, 5060	testdebit.riv54.fr
Fibragglo	Forbach	Grand Est	IPV4 Only	>1GBPS	8080, 5060	testdebit.fibragglo.fr
Naitways	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest.naitways.net
CCleaner	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest-ookla-prod-001-par.ff.avast.com

Regie Talange	Talange	Grand Est	IPV4 Only	>1GBPS	8080, 5060	testdebit.regie-talange.fr
Eurafibre	Lille	Hauts-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest.eurafibre.fr
Wibox	Val de Reuil	Normandy	IPV4 Only	>1GBPS	8080, 5060	speedtest-ookla.wibox.fr
Hexanet	Reims	Grand Est	IPV4 Only	>1GBPS	8080, 5060	speedtest.hexanet.fr
ORNE THD	Rombas	Grand Est	IPV4 + IPV6	>1GBPS	8080, 5060	speedtest.ornethd.net
softlayer	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest.par01.softlayer.com
REFO Falck	Falck	Grand Est	IPV4 Only	>1GBPS	8080, 5060	testdebit.falckhargarten.fr
Enes	Hombourg-Haut	Grand Ets	IPV4 Only	>1GBPS	8080, 5060	testdebithom.enes.fr
LaFibre.info	Bordeaux	Nouvelle-Aquitaine	IPV4 + IPV6	>1GBPS	8080, 5060	bordeaux.lafibre.info
Leonix Telecom	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest.leonix.fr
Extragornax	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	vpsbypass.extragornax.fr
ORANGE FRANCE	Rennes	Briattany	IPV4 + IPV6	>1GBPS	8080, 5060	rennes3.speedtest.orange.fr
ORANGE FRANCE	Puteaux	Île-de-France	IPV4 + IPV6	>1GBPS	8080, 5060	puteaux3.speedtest.orange.fr
Vialis	Colmar	Grand Est	IPV4 Only	>1GBPS	8080, 5060	testdebitpublic.vialis.net
Sewan	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest.sewan.fr

ORANGE FRANCE	Paris	Île-de-France	IPV4 + IPV6	>1GBPS	8080, 5060	montsouris3.speedtest.orange.
GTT.net	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	par.speedtest.gtt.net
ORANGE FRANCE	Lyon	Auvergne-Rhône-Alpes	IPV4 + IPV6	>1GBPS	8080, 5060	lyon3.speedtest.orange.fr
ORANGE FRANCE	Saint-Denis La Réunion	Réunion	IPV4 + IPV6	>1GBPS	8080, 5060	reunion3.speedtest.orange.fr
OVH Cloud	Gravelines	Nord	IPV4 + IPV6	>1GBPS	8080, 5060	speedtest-gra.as16276.ovh
SFR	Lyon	Auvergne-Rhône-Alpes	IPV4 Only	>1GBPS	8080, 5060	cor2.speedtest.mire.sfr.net
KEYYO	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	perf.keyyo.net
SFR	Mitry	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	mit1.speedtest.mire.sfr.net
Axione	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedperf.axione.fr
FullSave	Toulouse	Occitanie	IPV4 + IPV6	>1GBPS	8080, 5060	speedtest1.fullsave.com
ITDATA TELECOM SRL	Roubaix	Nord	IPV4 Only	>1GBPS	8080, 5060	speedtestfr.mirrors.ro
ORANGE FRANCE	Bordeaux	Nouvelle-Aquitaine	IPV4 + IPV6	>1GBPS	8080, 5060	bordeaux3.speedtest.orange.fr
ORANGE FRANCE	Strasbourg	Alsace	IPV4 + IPV6	>1GBPS	8080, 5060	strasbourg3.speedtest.orange.f
ORANGE FRANCE	Lille	Hauts-de-France	IPV4 + IPV6	>1GBPS	8080, 5060	lille3.speedtest.orange.fr
ORANGE FRANCE	Marseille	Provence-Alpes-Côte d'Azur	IPV4 + IPV6	>1GBPS	8080, 5060	marseille3.speedtest.orange.fr

SFR	Venissieux	Auvergne-Rhône-Alpes	IPV4 Only	>1GBPS	8080, 5060	lyo1.speedtest.mire.sfr.net
Enes Hag	Hagondange	Grand Est	IPV4 Only	>1GBPS	8080, 5060	testdebit.telehagondange.fr
Regivision	Nilvange	Grand Est	IPV4 Only	>1GBPS	8080, 5060	testdebit.regivision.fr
iBlooPro	Rennes	Brittany	IPV4 Only	>1GBPS	8080, 5060	speedtest.ibloopro.fr
Truphone	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest1-fr.truphone.com
MEDIACTIVE	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest.mediactive.fr
SFR	Trappes	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	tng1.speedtest.mire.sfr.net
SFR	Bordeaux	Nouvelle-Aquitaine	IPV4 Only	>1GBPS	8080, 5060	bdx1.speedtest.mire.sfr.net
EwOlves	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	ewolves.fr
Gnehc Europe	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	aws-paris-01.gnnodes.com
paris	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	par.host.speedtest.net
Aimo Company	Gravelines	Nord	IPV4 Only	>1GBPS	8080, 5060	speedtest.aimo.company
Unyc	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	ookla.unyc.io
Singe Network	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	singe.tk
Ngebuts	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	ookla-fr.ngebuts.com

Ineside France	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest.maasaki.fr
TvInDirect	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	tvindirect.com
Netprotect	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	ook-par-x1.puregig.net
RoTVUSCA	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest.rotvusca.com
OOPAYA SAS	Émerainville	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest.oopaya.com
Lite-Heberg	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest.lite-heberg.fr
Top Stream	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest.fr.pa.topstream.it
testdevelocidad.xyz	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest.fr.azure.testdevelocid
testdevelocidad.xyz	Paris	Île-de-France	IPV4 Only	>1GBPS	8080, 5060	speedtest.eu-west-3.aws.testdevelocidad.xyz

**At present we do not have an accurate list of server bandwidth for these servers. We know that there are no servers in France Operating under 1Gbps.