

**NET CHECK**

**BEST  
MOBILE  
NETWORK**

**NET CHECK  
2025**

# SERBIA'S BEST MOBILE NETWORK

BENCHMARK MEASUREMENT OF  
MOBILE NETWORKS IN SERBIA

FEBRUARY 2025

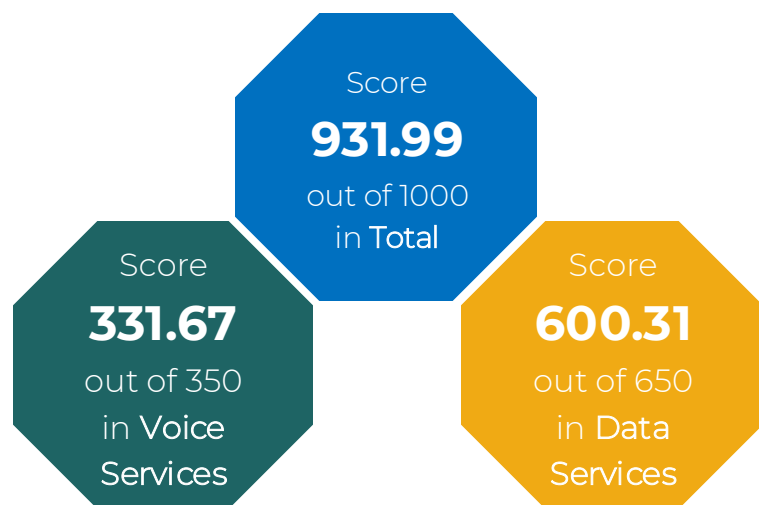


# SERBIA'S BEST MOBILE NETWORK

Mobile networks can be compared in terms of quality through a combined assessment of accessibility, reliability, and quality of typical telecommunication services.

The results of an extensive and complex testing procedure are translated into ranking points and the ranking result reflects the overall end-user experience.

With an overall score of 931.99 points, Telekom Srbija / mts achieved the highest score, followed by AI and then Yettel.



Quality  
assessment  
of modern  
communication  
networks

# BENCHMARKING METHODOLOGY

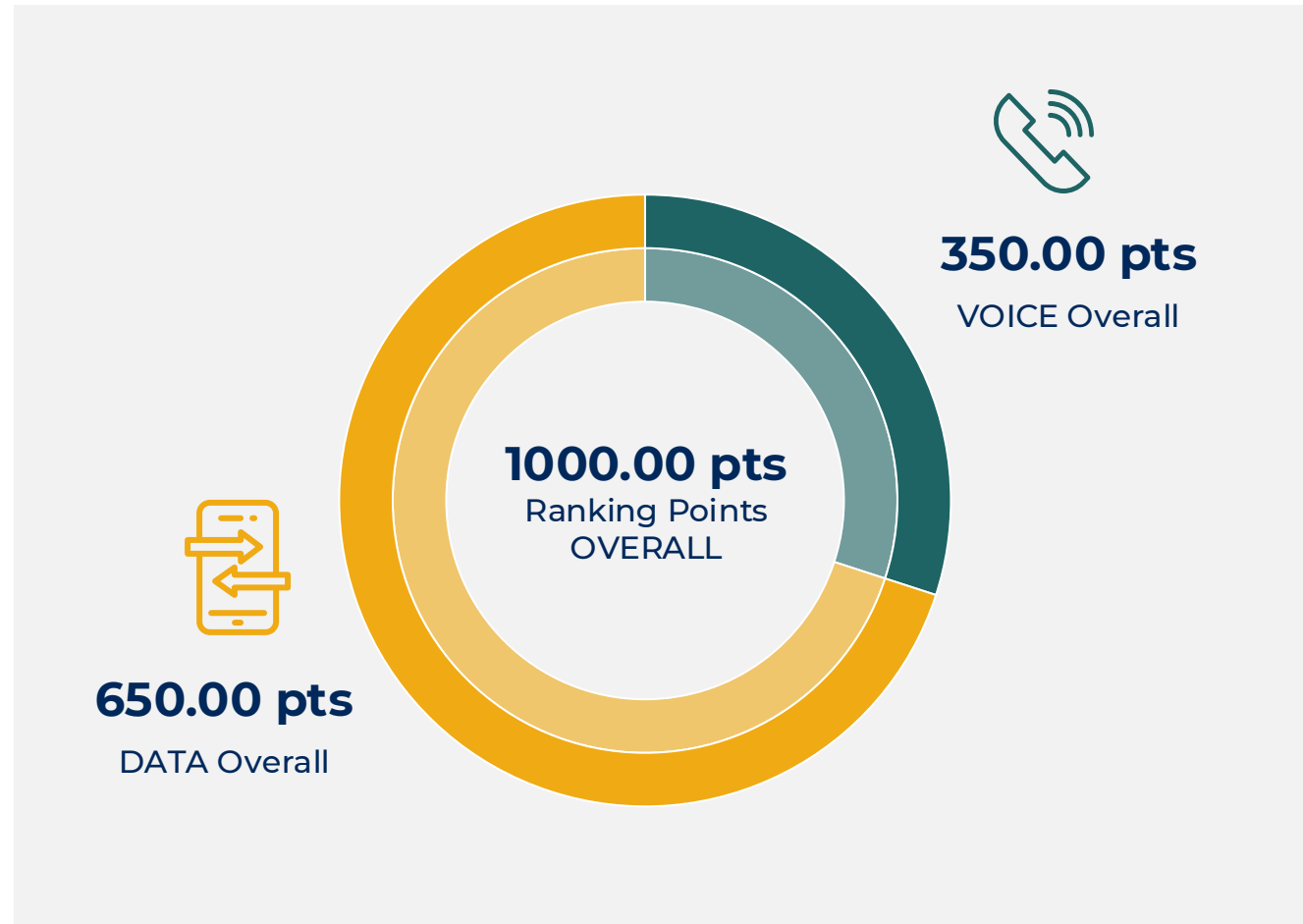
NET CHECK pairs engineering expertise with statistically rigorous methodologies in order to collect data on mobile network performance.

The focus is on precise, unbiased and balanced comparison between different mobile networks.

Different levels of service are evaluated, ranging from basic functionality to full technology potentials.

The needed amount of data is obtained through extensive drive testing in numerous cities various in size and along roads connecting them.

The Benchmarking Methodology is updated once a year, staying on top of the industry trends.



# MEASUREMENT EQUIPMENT

*SwissQual Smart Benchmark* produced by the market leader Rohde & Schwarz was used. The measuring equipment was placed in the roof box of a passenger car, executing predefined voice and data service testing sequences.

The mobile phones that are a part of the measuring system were cooled down to avoid overheating due to sun and extensive use.

For all tests current models of Samsung Android smartphones were used.

This approach allows for simultaneous performance measurement off all available mobile networks in the same locations.

NET CHECK

**NET CHECK**  
**attaches great**  
**importance**  
**to using high**  
**quality and**  
**state-of-the-art**  
**measurement**  
**technology**  
**for all tests**

# DRIVE TEST ROUTE & MEASUREMENT SETUP

MEASUREMENT PERIOD: 3<sup>rd</sup> of FEBRUARY – 22<sup>nd</sup> of FEBRUARY 2025  
(no measurements during public holidays)



**4 big cities**  
**7 medium cities**  
**28 small cities**  
DRIVE TESTS

**132 hours**  
CITY DRIVE TESTS

**56 hours**  
CONNECTING ROADS

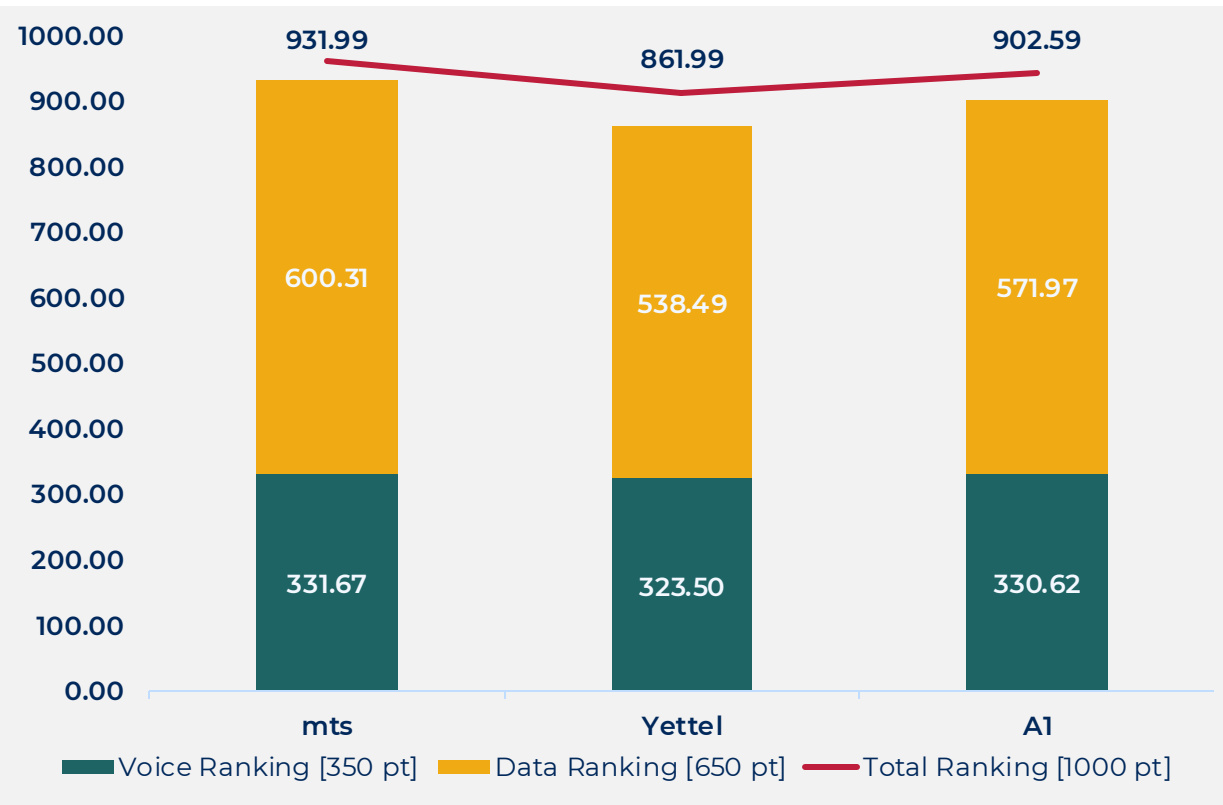
	VOICE SERVICES	DATA SERVICES
DEVICE	Samsung S23+	Samsung S23+
MEASUREMENT EQUIPMENT	SwissQual Smart Benchmark II (Rohde & Schwarz)	SwissQual Smart Benchmark II (Rohde & Schwarz)
MEASUREMENT OBJECTIVE	Cities and Connecting Roads	Cities and Connecting Roads
SAMPLE COUNT	~ 3,700 per operator	~ 38,000 per operator
TEST CASE SCENARIO	<p>Max Call Setup Time: 30 (s) Call duration: 120 (s) Call window: 155 (s) Call mode: VoLTE preferred</p> <p>Scenario: 1 x WhatsApp Call + 4 x VoLTE preferred (2 x Classic Call + 2 x MultiRAB)</p>	<p>YouTube (livestream HD), Web Browsing (Kepler as static, blic, halooglasi, tik tok, limundo, novosti, google, Instagram, and wikipedia as dynamic) Download and Upload tests:</p> <ul style="list-style-type: none"> <li>• HTTP time based (7s): FDTT DL/ UDP FDTT UL</li> <li>• HTTP/ HTTPS file based: FDFS DL/ UL (10MB/5MB)</li> </ul> <p>Interactivity tests</p>

# OVERALL RESULTS

Telekom Srbija / mts is the best ranked operator

A1 took second place

Yettel ranked third



**OVERALL RESULTS**

**931.99 pt**

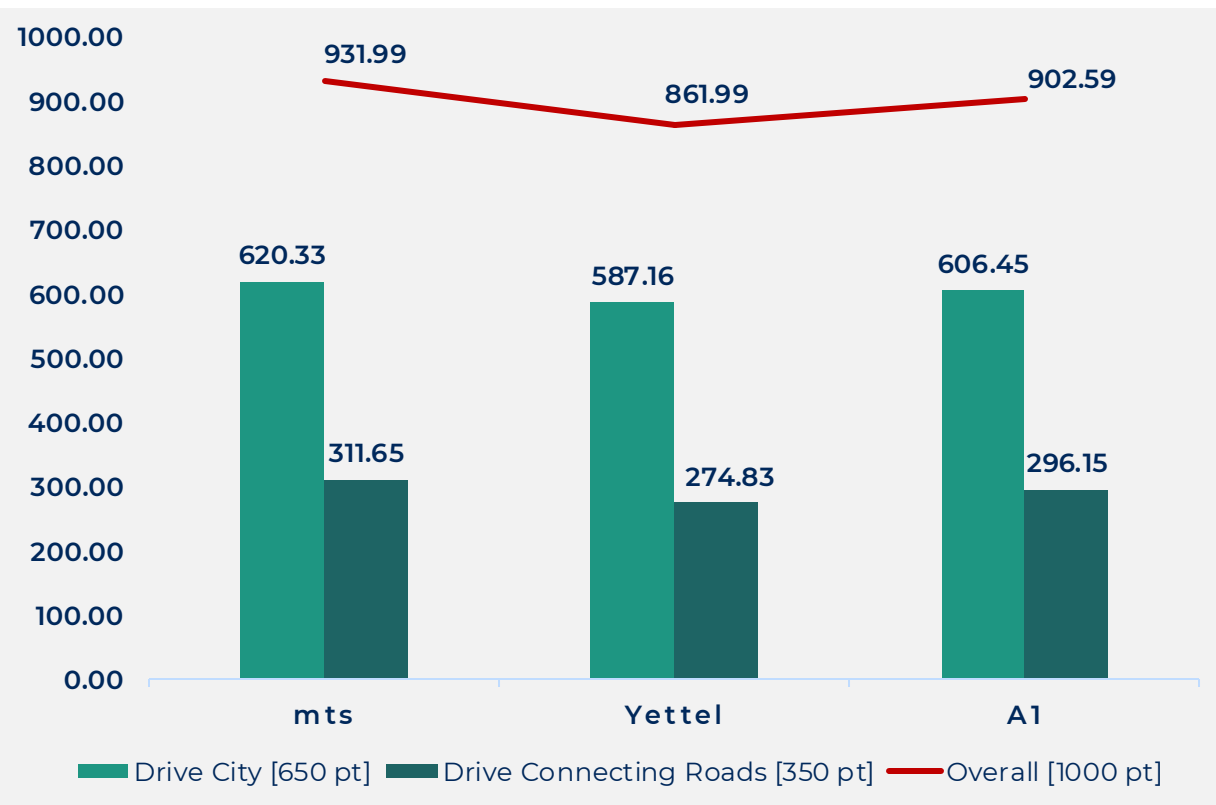
#1: mts



Telekom Srbija

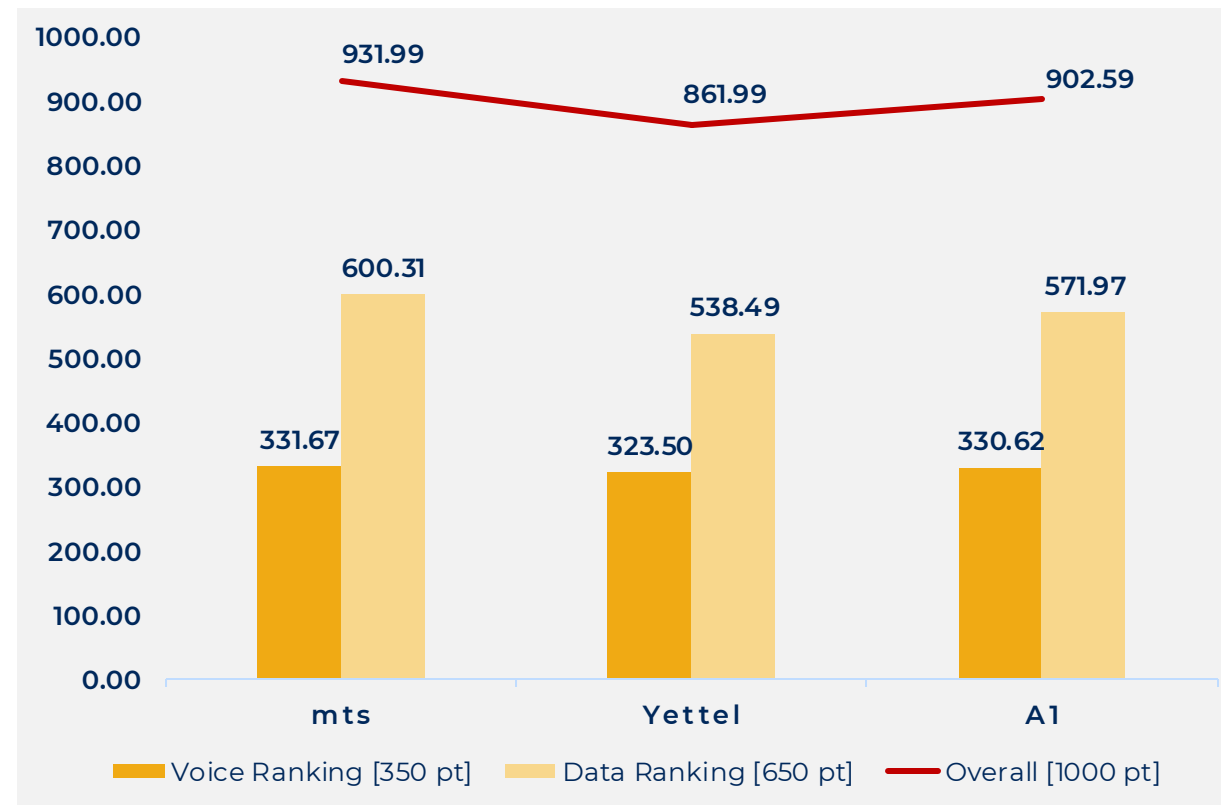
# RANKING PER MODULE RESULTS

mts is the best ranked in the city module as well as on connecting roads



# VOICE & DATA RESULTS

mts is the best mobile network in both voice and data evaluation



# VOICE RESULTS

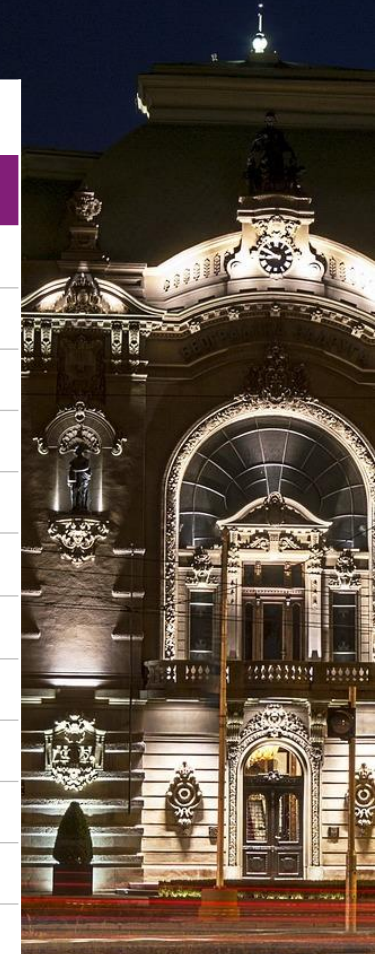
	VOICE DRIVE - CITY			VOICE DRIVE - CONNECTING ROADS		
Ranking Identifiers	mts	Yettel	A1	mts	Yettel	A1
<b>CLASSIC CALLS</b>						
Call Setup Success Ratio	99.95%	99.73%	99.91%	98.55%	97.59%	98.31%
Dropped Call Ratio	0.00%	0.05%	0.09%	0.29%	0.73%	0.57%
AVG Call Setup Time	1.39 [s]	1.52 [s]	1.29 [s]	1.49 [s]	1.71 [s]	1.39 [s]
Call Setup Time > 15 s Ratio	0.00%	0.05%	0.00%	0.15%	0.44%	0.14%
MOS <= 1.6 RATIO	0.38%	0.41%	0.24%	1.08%	1.05%	0.54%
POLQA AVG MOS	4.67 [MOS]	4.62 [MOS]	4.68 [MOS]	4.60 [MOS]	4.53 [MOS]	4.65 [MOS]
Disturbed and Impaired Call Ratio	0.09%	0.00%	0.05%	0.15%	0.44%	0.29%
<b>WHATSAPP CALLS</b>						
Call Setup Success Ratio	100.00%	100.00%	100.00%	100.00%	99.01%	99.51%
Dropped Call Ratio	0.16%	0.00%	0.00%	0.00%	0.50%	0.50%
MOS <= 1.6 RATIO	0.15%	0.24%	0.09%	0.88%	0.55%	0.25%
POLQA AVG MOS	4.31 [MOS]	4.26 [MOS]	4.33 [MOS]	4.28 [MOS]	4.26 [MOS]	4.31 [MOS]
Disturbed and Impaired Call Ratio	0.00%	0.00%	0.16%	1.00%	0.50%	0.50%
<b>MULTI RAB DATA</b>						
Multi RAB Data Success Ratio	100.00%	100.00%	100.00%	99.69%	97.26%	98.79%





# DATA RESULTS (1/2)

	DATA DRIVE - CITY			DATA DRIVE - CONNECTING ROADS		
Ranking Identifiers	mts	Yettel	A1	mts	Yettel	A1
<b>DOWNLOAD (File Size 10MB)</b>						
FDFS DL Success Ratio (%)	99.96%	99.96%	99.84%	99.01%	97.71%	98.24%
FDFS DL Transfer Time [s]	1.53 [s]	2.22 [s]	2.98 [s]	1.58 [s]	3.05 [s]	3.10 [s]
<b>UPLOAD (File Size 5MB)</b>						
FDFS UL Success Ratio (%)	99.92%	99.96%	99.96%	98.39%	96.94%	97.98%
FDFS UL Transfer Time [s]	1.37 [s]	1.31 [s]	1.99 [s]	2.20 [s]	2.41 [s]	3.38 [s]
<b>DOWNLOAD (Test Duration 7 seconds)</b>						
Above 2Mbps (%)	99.96%	99.88%	99.96%	99.52%	98.88%	100.00%
Above 5Mbps (%)	99.81%	99.30%	99.96%	98.92%	95.78%	98.90%
Above 20Mbps (%)	97.04%	92.15%	97.74%	96.77%	79.78%	96.07%
Above 100Mbps (%)	53.02%	29.88%	53.90%	57.96%	23.95%	54.85%
FDTT DL 90 PCTL Data Rate [Mbit/s]	188.40 [Mbit/s]	153.40 [Mbit/s]	197.14 [Mbit/s]	209.75 [Mbit/s]	147.85 [Mbit/s]	203.54 [Mbit/s]



# DATA RESULTS (2/2)

	DATA DRIVE - CITY			DATA DRIVE - CONNECTING ROADS		
Ranking Identifiers	mts	Yettel	A1	mts	Yettel	A1
<b>UPLOAD (Test Duration 7 seconds)</b>						
Above 1Mbps (%)	100.00%	100.00%	100.00%	99.24%	99.08%	98.97%
Above 3Mbps (%)	99.92%	99.96%	99.88%	98.35%	97.89%	95.61%
Above 10Mbps (%)	99.00%	99.47%	98.37%	92.25%	90.66%	86.18%
Above 20Mbps (%)	95.38%	97.35%	90.51%	84.63%	80.00%	68.60%
FDDT UL 90 PCTL Data Rate [Mbit/s]	115.39 [Mbit/s]	118.37 [Mbit/s]	82.46 [Mbit/s]	107.24 [Mbit/s]	98.24 [Mbit/s]	70.82 [Mbit/s]
<b>BROWSING (Web Browsing)</b>						
HTTP Browsing Time to 1MB	846.99 [ms]	1021.59 [ms]	1035.88 [ms]	853.42 [ms]	1154.91 [ms]	1046.55 [ms]
HTTP Browsing Success Ratio (%)	99.38%	98.39%	99.55%	98.47%	96.22%	98.25%
<b>VIDEO STREAM (YouTube Live Stream HD)</b>						
Video Stream Success Ratio (%)	99.73%	100.00%	99.96%	98.78%	97.88%	98.89%
Video Stream TTFP >= 10 s Ratio (%)	0.00%	0.00%	0.08%	0.00%	0.51%	0.00%
Video Stream Irritating Experience Ratio (%)	0.00%	0.04%	0.08%	0.00%	0.25%	0.12%
<b>INTERACTIVITY</b>						
Interactivity Packet Error Ratio (%)	0.68%	4.09%	18.00%	1.53%	4.54%	18.24%
Interactivity Median RTT [ms]	45.03 [ms]	62.75 [ms]	53.24 [ms]	44.79 [ms]	63.27 [ms]	53.53 [ms]



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