Global Gateway

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Team Europe Initiative
Digital Connectivity in Central Asia

Connectivity for Central Asia

3-11-2026

EXPERTISE FRANCE
GROUPE AFD

Central Finance and Contracting Agency Republic of Latvia

CPVA
Central project management agency

eGA
e-governance academy

HAUS

LATVIAN IT CLUSTER

1862
RĪGAS TEHNISKĀ UNIVERSITĀTE

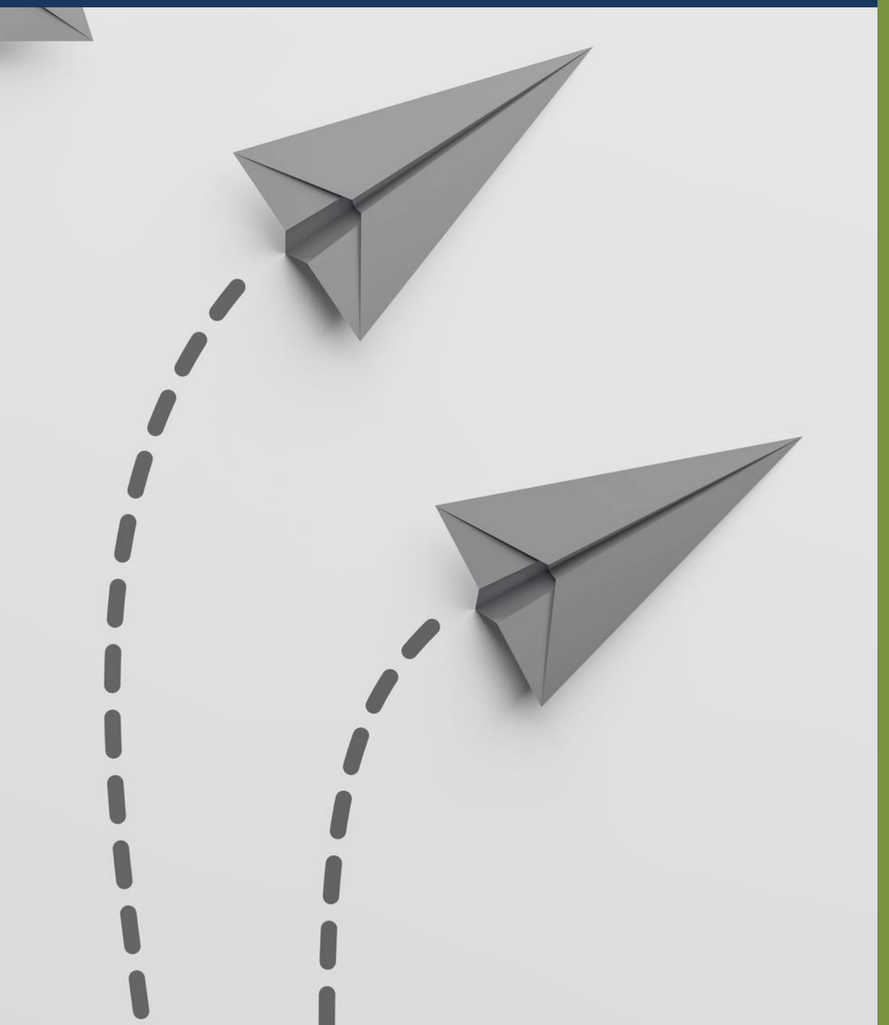


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TOOL FOR EVALUATION OF IAS QUALITY OF SERVICE

Dr. Virgilijus Stundžia

Internet access service

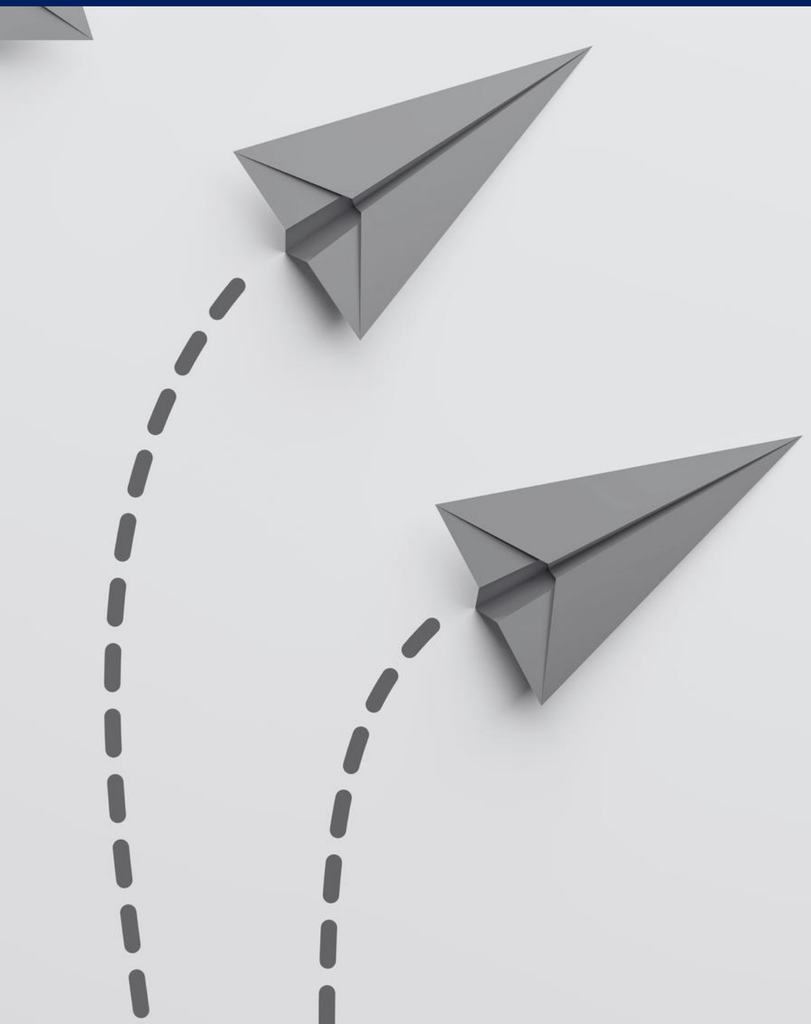


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- **Internet access service** means a publicly available electronic communications service that provides access to the internet, and thereby connectivity to virtually all end points of the internet, irrespective of the network technology and terminal equipment used.

- **End-users shall have the right** to access and distribute information and content, use and provide applications and services, and use terminal equipment of their choice, irrespective of the end-user’s or provider’s location or the location, origin or destination of the information, content, application or service, via their internet access service

Internet access service (2)



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General IAS QoS

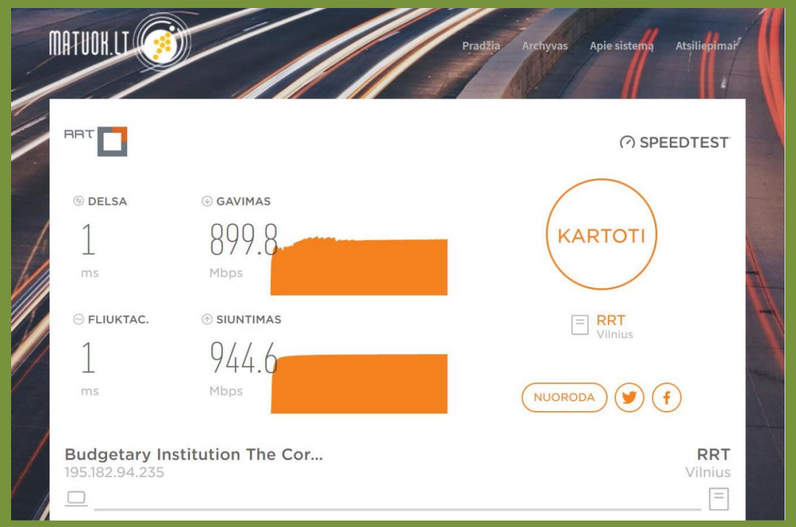
Information in contracts and publicly available information

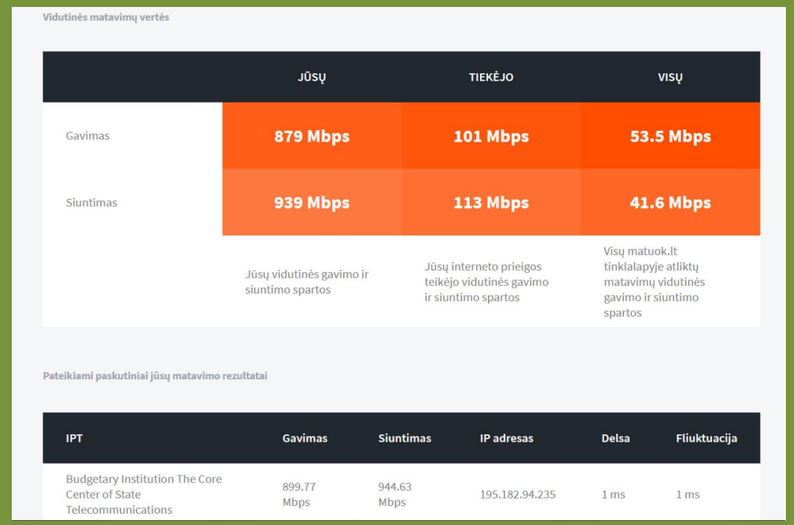
- Fixed IAS QoS parameters (at least) : minimum, normally available, maximum and advertised download and upload speed of the internet access services
- Mobile IAS QoS parameters (at least): estimated maximum and advertised download and upload speed of the internet access services
- The information how significant deviations from the respective advertised download and upload speeds could impact the exercise of the end-users' rights

RRT former IAS QoS evaluation tool 2016 – 2025

Functionality and parameters

- Publicly available on http://matuok.lt;
- For fixed and mobile Internet access services users;
- Based on HTML5 technology and uses the measurement module provided by OOKLA;
- Download, upload speeds, latency and jitter;
- Determines user IP and ISP name;
- User measurement results archive (cookies);
- Questionnaire for consumers about contractual terms of service





Vidutinės matavimų vertės

	JŪSŲ	TIEKĖJO	VISŲ
Gavimas	879 Mbps	101 Mbps	53.5 Mbps
Siuntimas	939 Mbps	113 Mbps	41.6 Mbps
	Jūsų vidutinės gavimo ir siuntimo spartos	Jūsų interneto prieigos teikėjo vidutinės gavimo ir siuntimo spartos	Visų matuok.lt tinklalapyje atliktų matavimų vidutinės gavimo ir siuntimo spartos

Pateikiami paskutiniai jūsų matavimo rezultatai

IPT	Gavimas	Siuntimas	IP adresas	Delsa	Fliuktuacija
Budgetary Institution The Core Center of State Telecommunications	899.77 Mbps	944.63 Mbps	195.182.94.235	1 ms	1 ms

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RRT current IAS quality evaluation tool

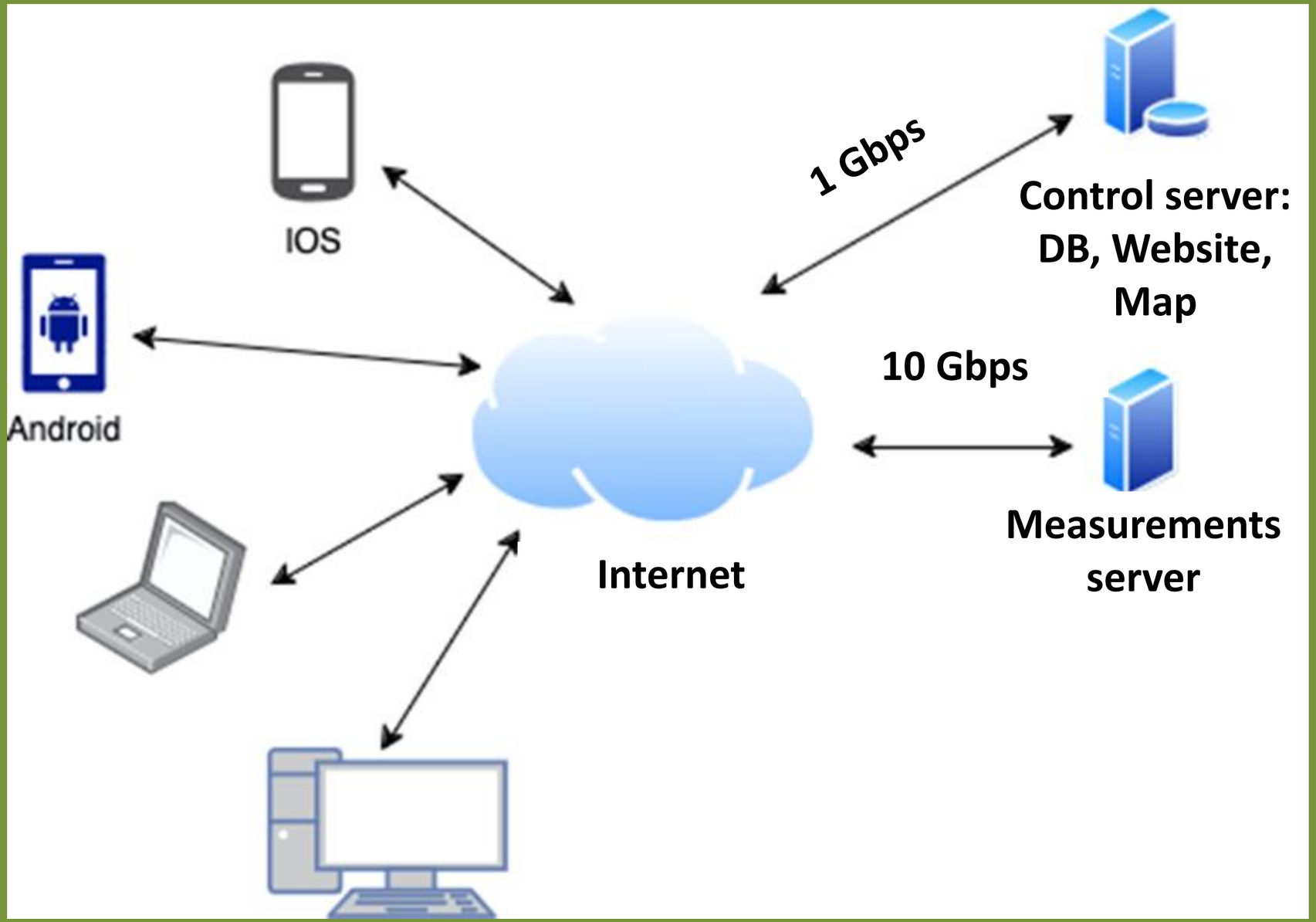
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- The measurement system is based on the RTR NetTest open-source solution
- The implementation and testing of the measurement system took 8 months.
- Operates since April 2025

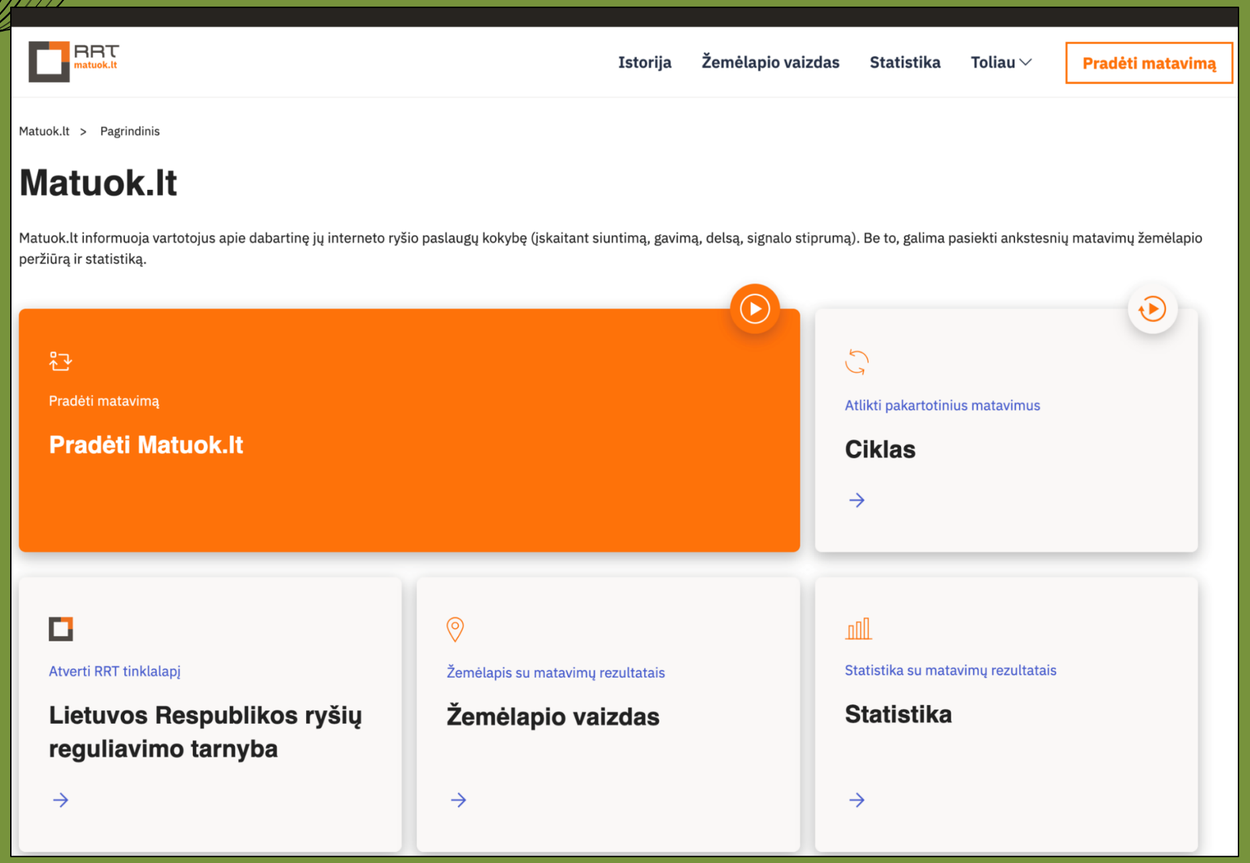


Current IAS measurement tool

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Scope:

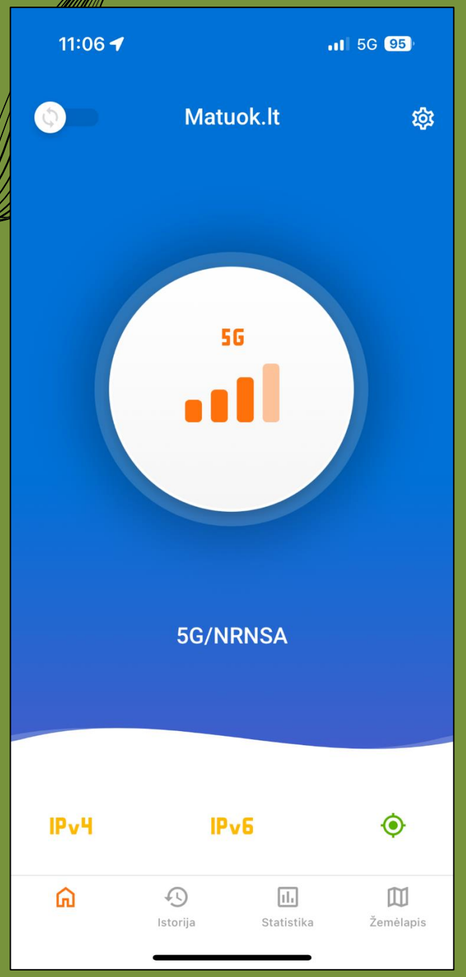
- Website - https://matuok.lt
- Android App
- IOS App

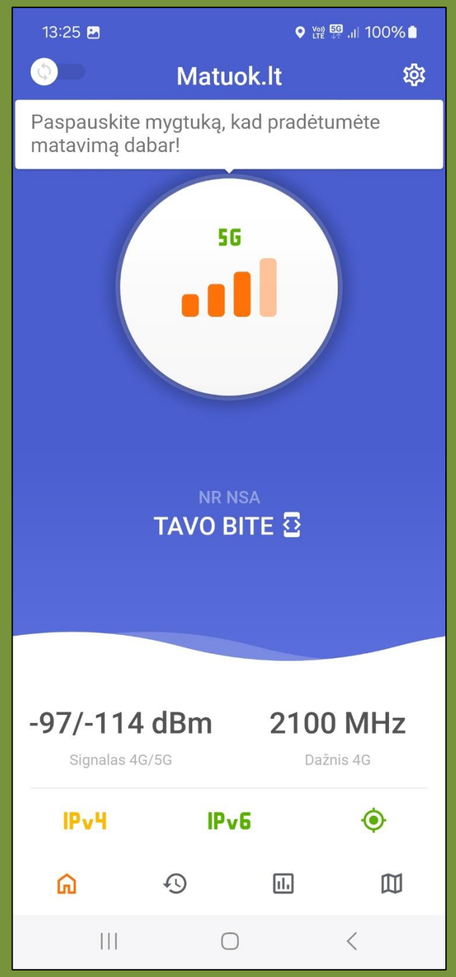
https://matuok.lt website:

- Browser measurement Upload, Download speeds, Delay
- Loop measurement
- Map
- Statistics
- Open data

MOBILE APPS, IOS AND ANDROID

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Download on the App Store

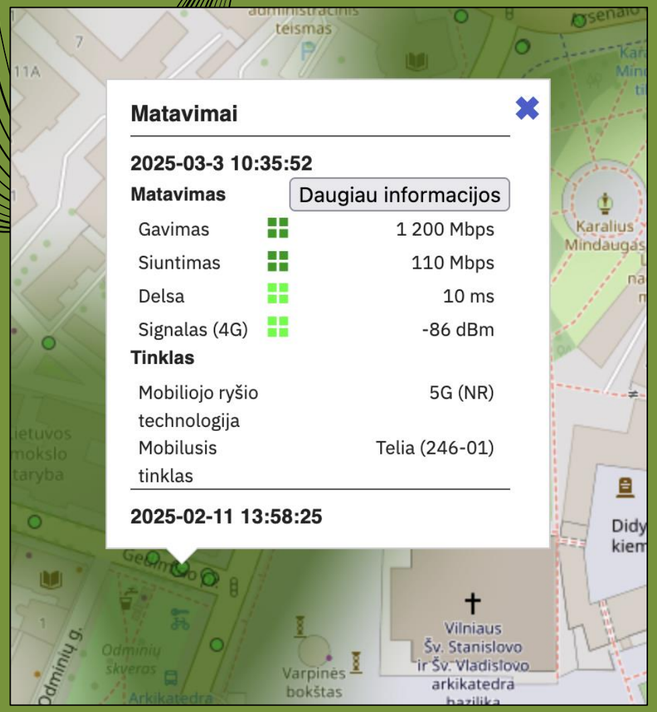
GET IT ON Google Play

Mobile apps:

- UL and DL speeds and delay measurement
- QoS evaluation (Web page download (Kepler -ETSI), Port blocking TCP and UDP, DNS, Unmodified content, Transparent connection, Traceroute)
- Loop measurement
- Map
- Statistics
- Measurements history

WEBSITE, DETAILED VIEW OF MEASUREMENT RESULTS

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Matavimo rezultatas

Gavimo sparta	1 404 Mbps
Siuntimo sparta	169 Mbps
Delsa	15 ms

Detalūs matavimai

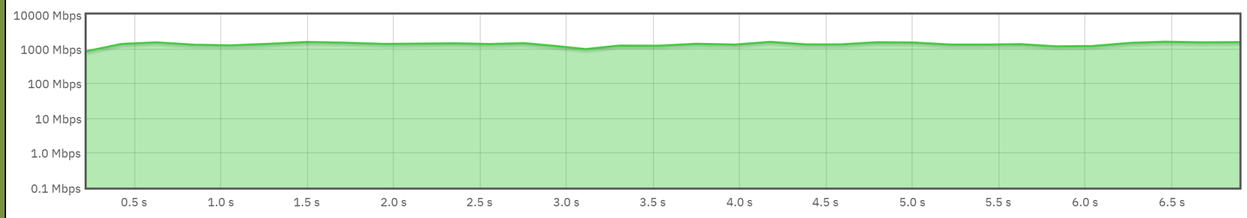
Tinklas (vaizdinis)	Telia LT
Operatorius	Telia
Tinklo šalis	Lietuva
Namų tinklas MCC-MNC	246-01
SIM gimtoji šalis	Lietuva
NAT būsena	no_nat_ipv6
IP šalis	Lietuva
Viešojo IP tinklo pavadinimas	TELIA-LIETUVA, LT

Rodyti detales

Laikas	Sparta	Duomenų apimtis
0.22 s	876 Mbps	25 MB
0.43 s	1 419 Mbps	61 MB
0.63 s	1 575 Mbps	100 MB
0.84 s	1 338 Mbps	136 MB
1.06 s	1 288 Mbps	171 MB
1.28 s	1 427 Mbps	211 MB
1.50 s	1 610 Mbps	254 MB
1.70 s	1 544 Mbps	293 MB
1.94 s	1 408 Mbps	336 MB
2.15 s	1 439 Mbps	373 MB

Spartos kreivė

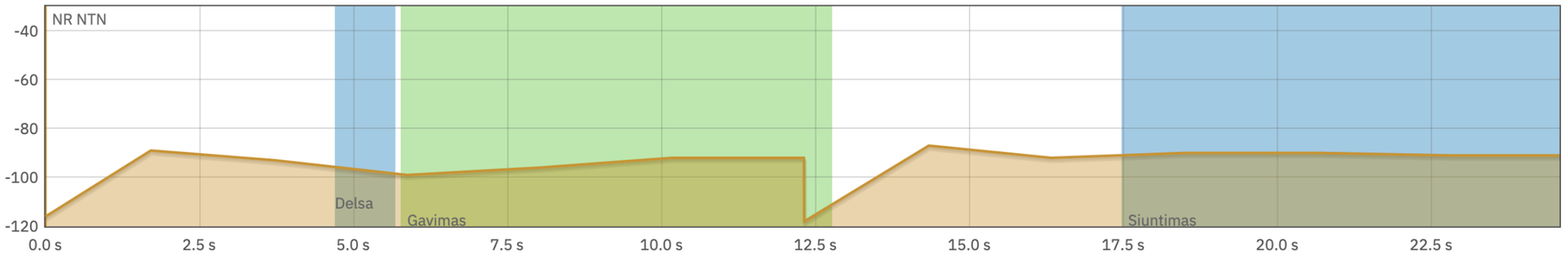
Gavimas



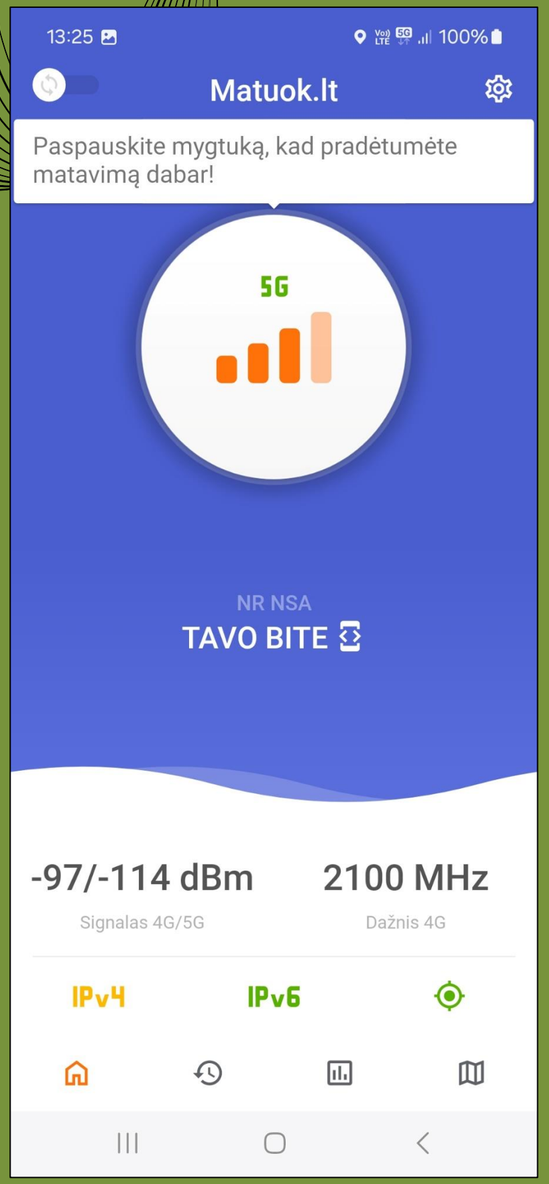
Paslaugos kokybė

Tinklalapis	1/1 - detalės
Nepakitęs turinys	2/2 - detalės
Skaidrus ryšys	0/5 - detalės
DNS	34/34 - detalės
TCP prievadai	0/18 - detalės

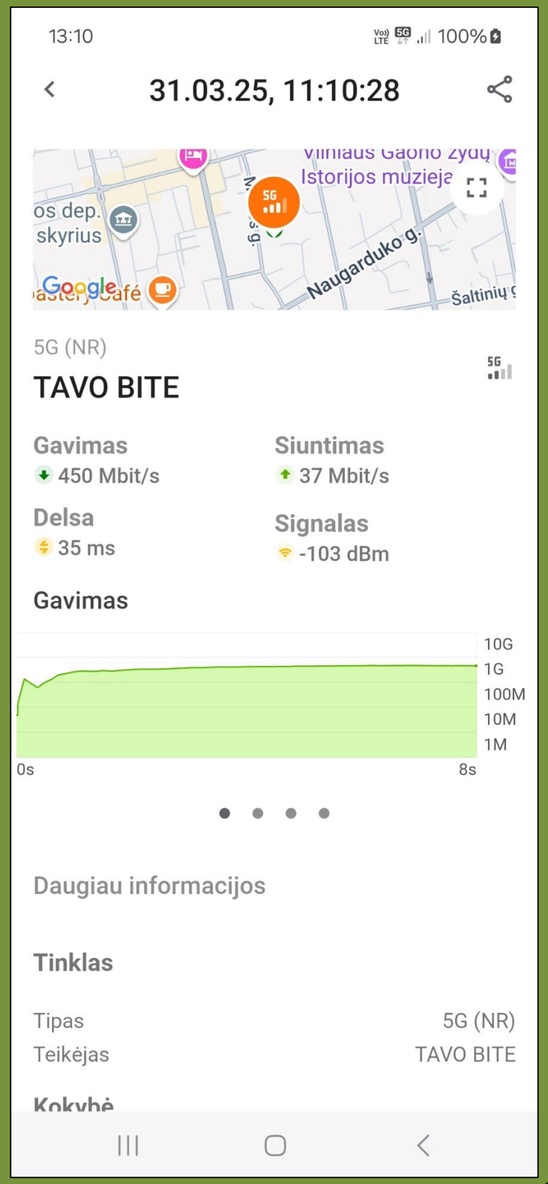
Signalo stiprumas

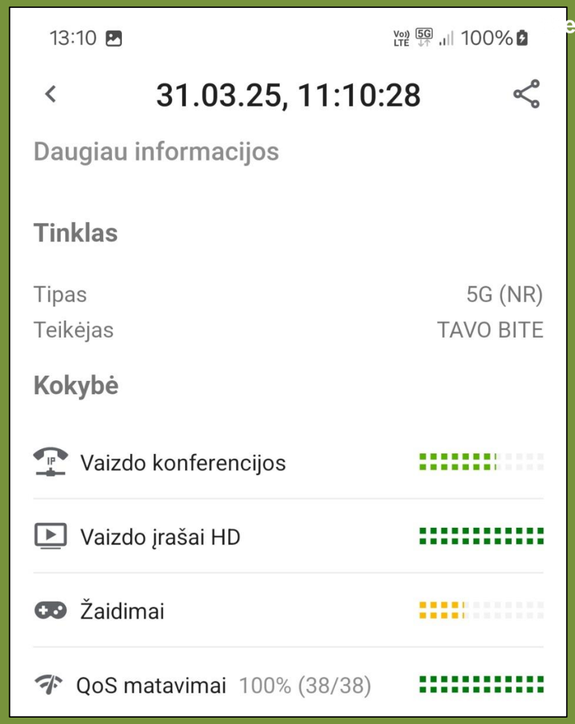


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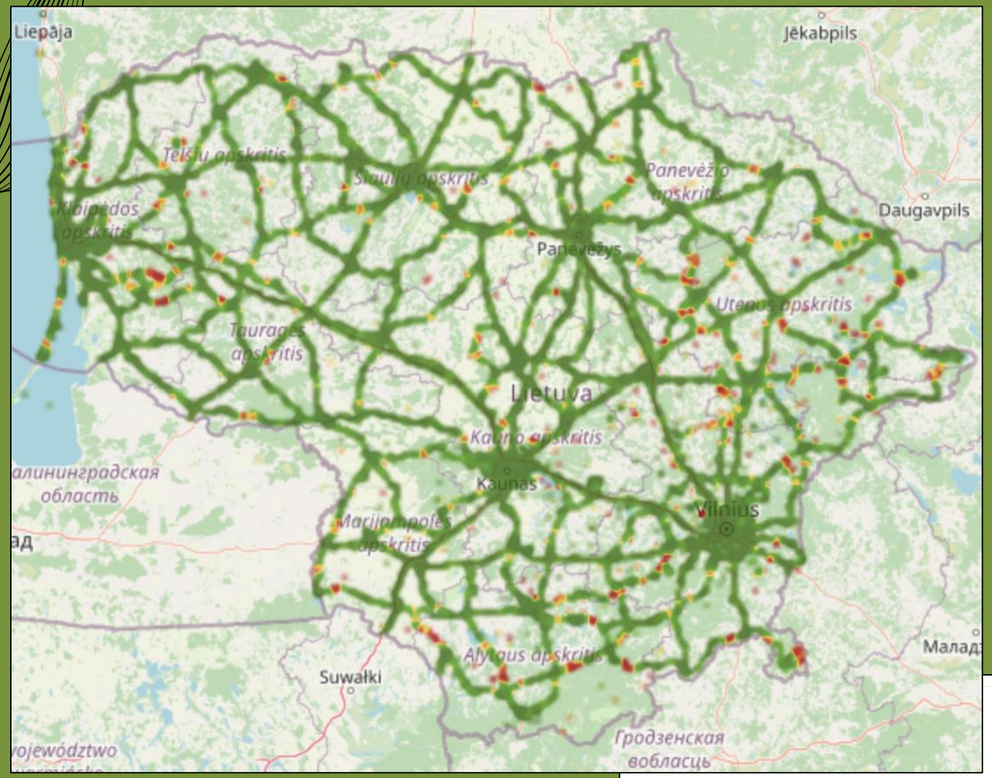




https://matuok.lt

MATUOK.LT STATISTICS AND USAGE

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- Up to 1000 measurements per day
- RRT performs drive tests using the same tool

2025-09-06 13:42:39	TELE2, EU, iPhone17,4 (iOS WLAN)
2025-09-06 13:41:03	PILDYK, moto g84 5G (Android 5G)
2025-09-06 13:36:35	TELE2, EU, SM-S901B (Android WLAN)
2025-09-06 13:32:05	BITE Bite IP Network, LT, Chrome (LAN)

Tipas Mobilusis Laiko tarpas 6 mėnuo daugiau ▼

Pavadinimas	Gavimas	Siuntimas	Delsa	Signalas	Kiekis
Tele2	108 Mbps	13 Mbps	30 ms	-	24 303
Telia	195 Mbps	32 Mbps	24 ms	-	22 794
Bitė	95 Mbps	13 Mbps	25 ms	-	19 054
	127 Mbps	**19 Mbps**	**27 ms**	**-**	**66 151**

HOW WIDESPREAD IS THE RTR “NETTEST”IN EUROPE?

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Country	Regulatory authority	Test	Android	iOS	Web Browser
Czech Republic	ČTÚ	ČTÚ-NetTest	Link	Link	X
Croatia	HAKOM	HAKOMetar Plus	Link	Link	X
Slovakia	RÚ	RU MobilTest	Link	Link	X
Serbia	RATEL	RATEL NetTest	Link	Link	X
Norway	Nkom	Netfart	Link	Link	X
Slovenia	AKOS	AKOS Test Net	Link	Link	X
Luxembourg	ILR	checkmynet	Link	Link	X
Kosovo	ARKEP	ARKEP Nettest	Link	-	X
Montenegro	EKIP	Nettest EKIP	Link	Link	X
Finland	Traficom	Bittimittari.fi	Link	Link	X
Spain	CNMC	planed	planed	planed	planed
Bulgaria	CRC	CRC QoS App	Link	Link	X
Switzerland	Bakom/Verein QI	Networktest.ch	Link	Link	X
Lithuania	RRT	https://test.matuok.lt	Link	Link	X

Conclusions

The tool enables end-users to check IAS general QoS parameters.

Measurements may be submitted as primary evidence when end-user issues a complaint about poor-quality services.

Measurements results and statistical data are publicly available and are shown on the map.

The tool and it‘s statistical data processing features enable RRT to monitor IAS quality



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Thank you for your attention