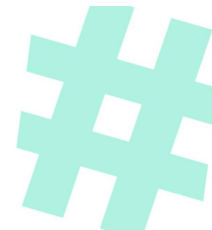


# Throttling YouTube in Russia:

Impact on Telecom Infrastructure and Access to Information

Mikhail Klimarev



# Timeline

Law 90-FZ “On Sovereign Runet” was passed, comprehensive internet blocking infrastructure (DPI) built.

Blocking popular VPN services by “connection endpoint”

**Throttling YouTube as a specific case of blocking.**



Before War

March 2022

June 2022

August 2023

August 2024

After the war began, all independent media, as well as Facebook, Instagram, and Twitter, were blocked.

VPN blocking by protocols affected OpenVPN, WireGuard, IPSec, etc.

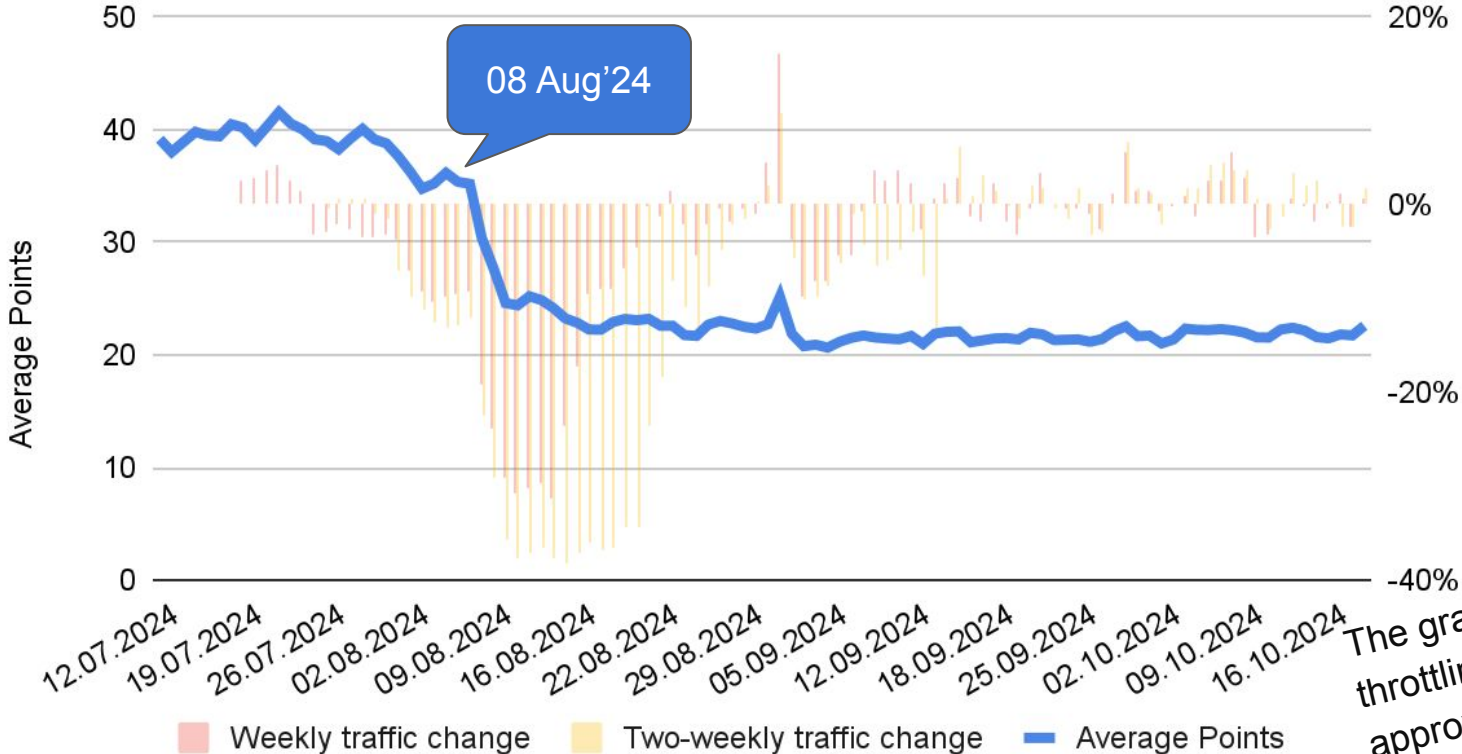
# Youtube Traffic from Russia (GTR)



The Google Transparency Report provides data on YouTube traffic from various countries, including Russia. This report typically includes information on content removal requests, data on service availability, and traffic statistics.


*It is evident that the decline in traffic became noticeable on August 2nd, although reports and user complaints started appearing two weeks earlier.*

# Average daily traffic for YouTube, Russia



The graph shows that the throttling stabilized at approximately 30% of the baseline traffic.

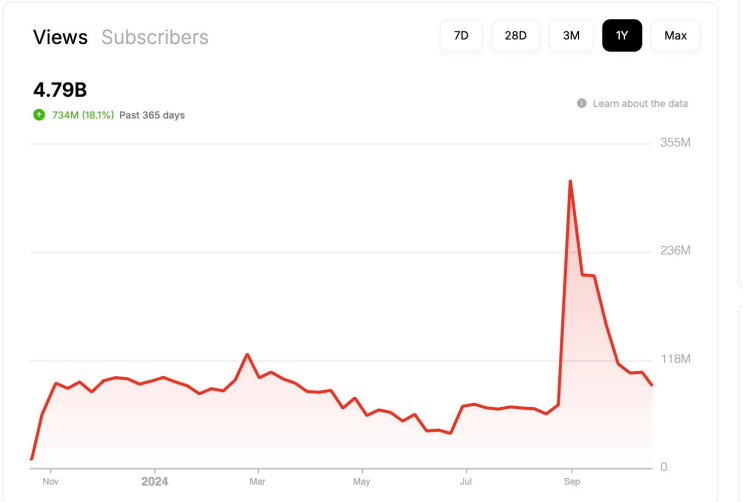
# But...


 **Маша и Медведь** 🇷🇺  
@mashabearussian 1,931 videos

Subscribers  
**50,900,000** #56 ⭐

Channelytics Videos Projections Similar Channels

**VIEWS** **4.79B** **SUBS** **6.20M** **EST REV** **\$2M-6.5M**  
LAST 365 DAYS ↑ 734M LAST 365 DAYS ↑ 1M LAST 365 DAYS ↑ \$13M

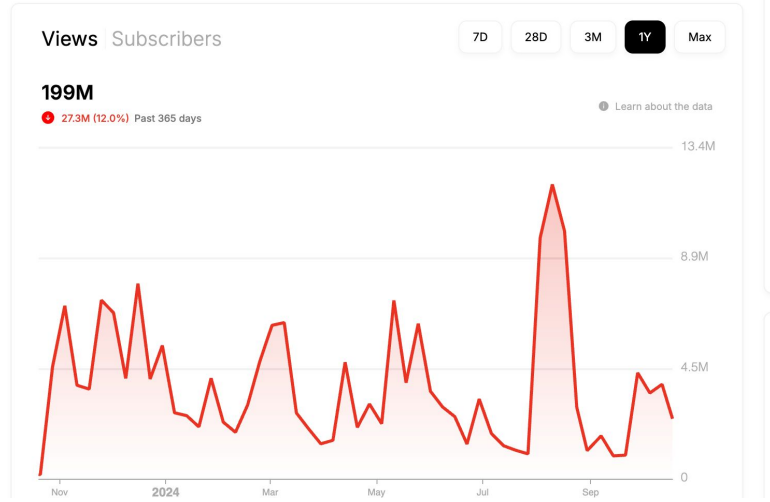


 **ВДУДЬ** 🇪🇸  
@vdud 197 videos

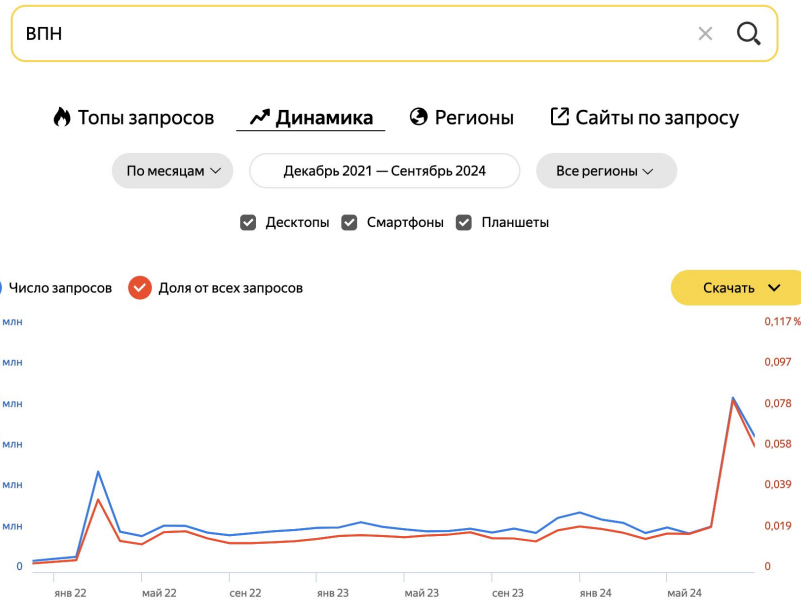
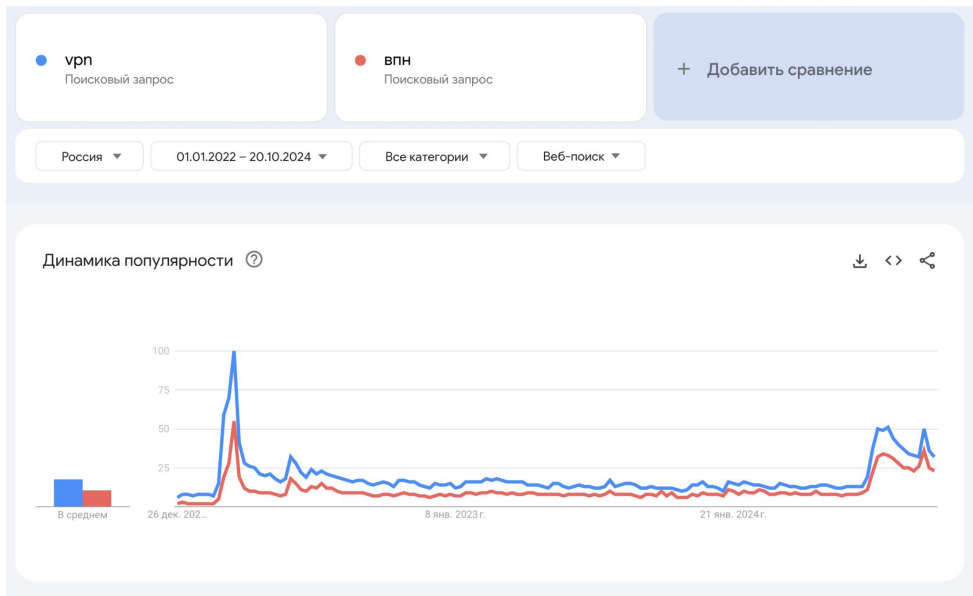
Subscribers  
**10,300,000** #372

Channelytics Videos Projections Similar Channels

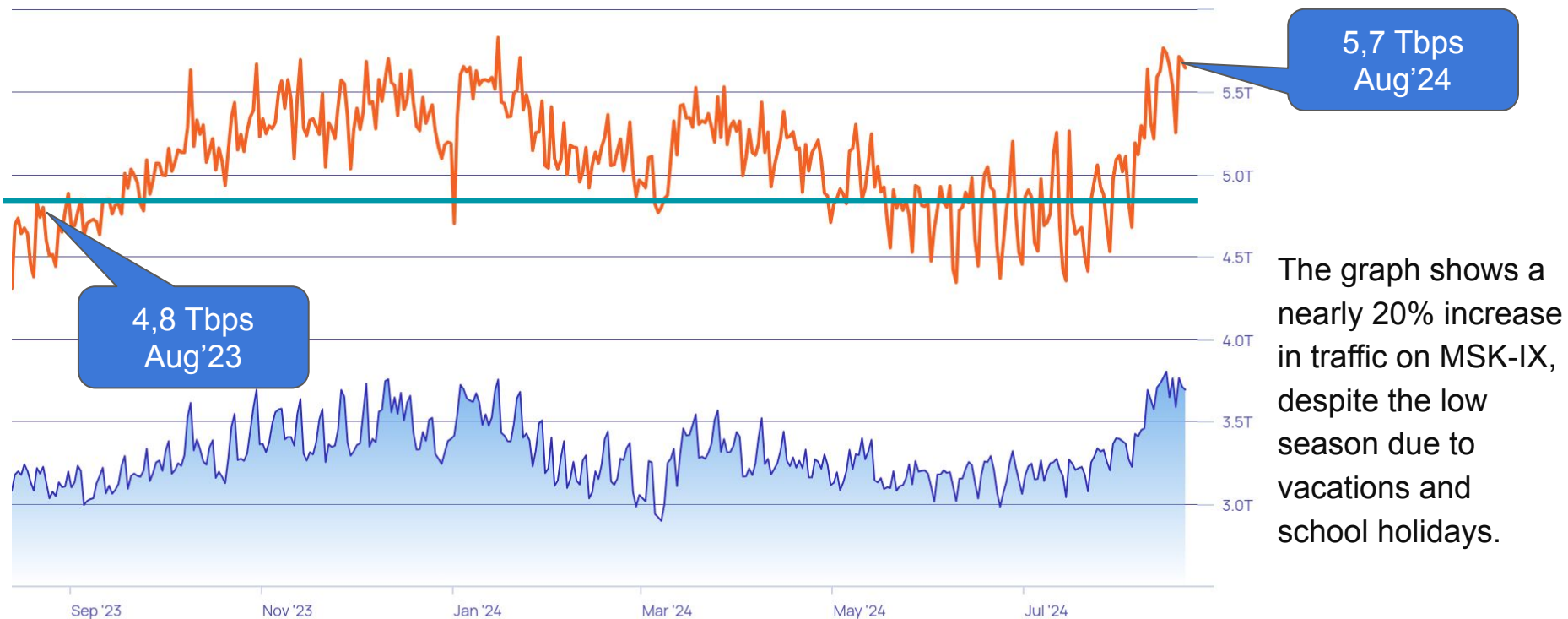
**VIEWS** **199M** **SUBS** **0** **EST REV** **\$83K-181K**  
LAST 365 DAYS ↓ 27.28M LAST 365 DAYS ↓ 200K LAST 365 DAYS ↓ \$38.5K



# Google Trends & Yandex Wordstat

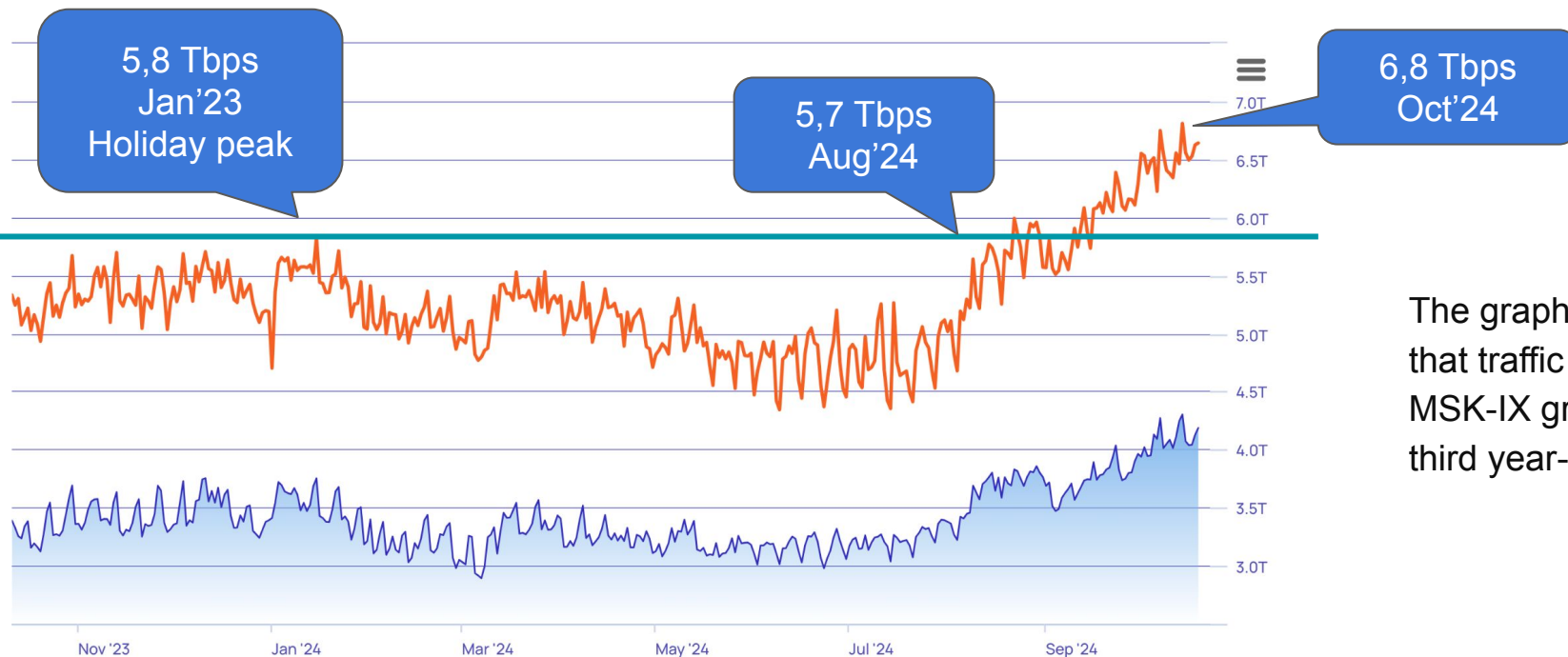


# Summary of traffic for MSK-IX customers



The graph shows a nearly 20% increase in traffic on MSK-IX, despite the low season due to vacations and school holidays.

# Summary of traffic for MSK-IX customers (new)



The graph shows that traffic on MSK-IX grew by a third year-on-year

Average: 5295 Gbps    Maximum: 6809 Gbps

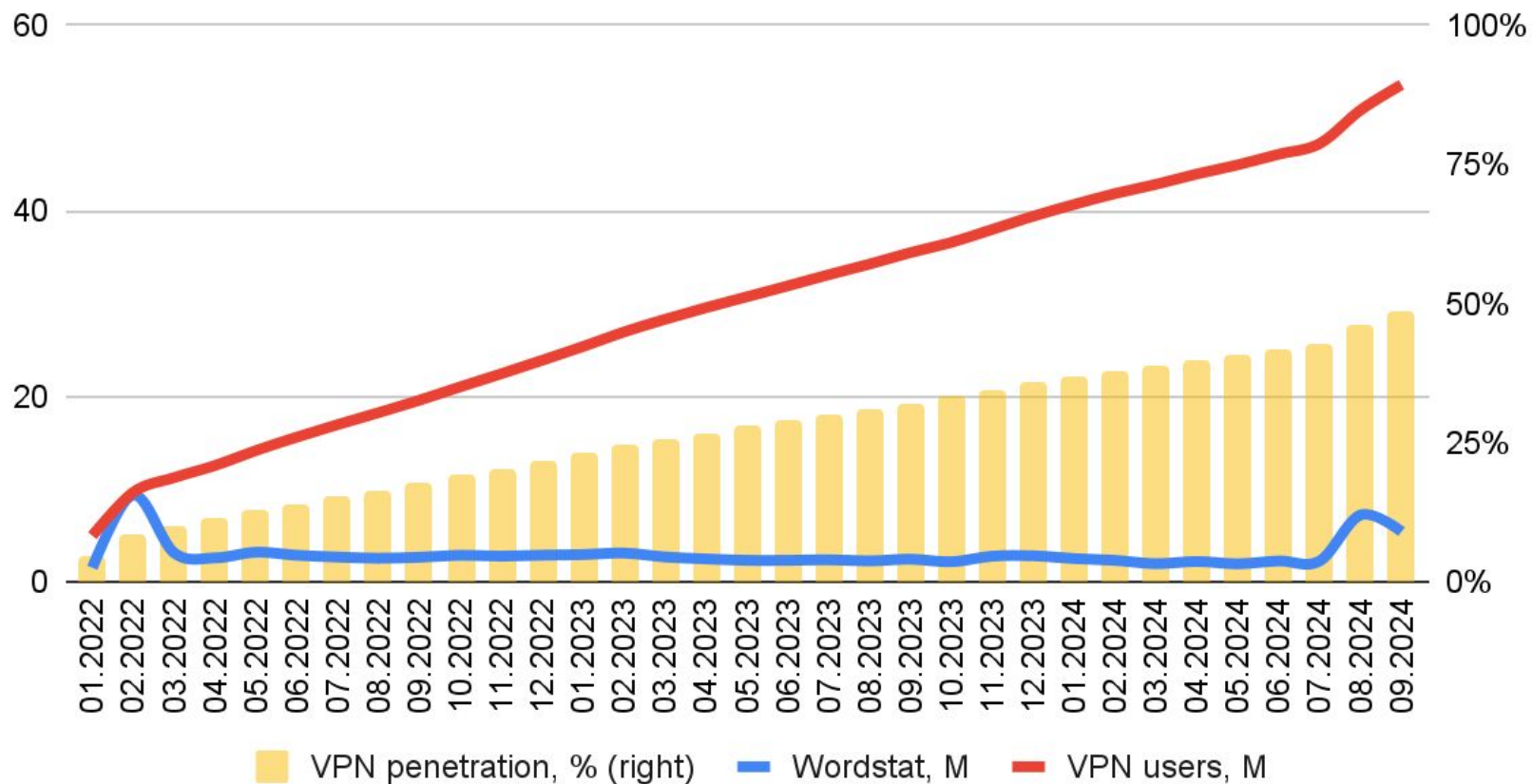
Updated 19.10.2024, 06:55



# Conclusion

In conclusion, the data indicates a significant shift in internet traffic patterns in Russia, with noticeable impacts from the throttling of YouTube. Despite the seasonal expectations of lower traffic due to vacations and school holidays, there has been a marked increase in traffic on MSK-IX, suggesting a possible redistribution of internet usage as users seek alternative platforms or methods to access content. The stabilization of YouTube traffic at 30% of its baseline further underscores the substantial effect of these measures on access to information within the country.

# RU, VPN Penetration (model)



# Economic Indicators for Russian Telecom Operators

## Key Challenges for Russian Telecom Operators:

1. **Workforce Exodus:** The mass departure of skilled professionals is leading to a shortage of expertise and reduced service quality.
2. **Sanctions:** Sanctions have blocked access to essential equipment, forcing operators into “parallel imports,” increasing risks and costs.
3. **Financial Constraints:** Operators face limited access to external financing and high domestic interest rates, stifling infrastructure investment.
4. **Vendor Withdrawals:** The exit of key vendors has left operators struggling to maintain and support existing systems.
5. **Infrastructure Damage:** Ongoing conflict is causing significant damage to telecom infrastructure.

## Revenue Impact:

These challenges have driven up operating costs. Additionally, the throttling of YouTube, which accounted for about a third of internet traffic, is leading to subscriber losses and a sharp decline in revenue.

# What is the Russian government doing?

The Federal Antimonopoly Service (FAS) has ordered MTS to reduce tariffs and pay 3 billion rubles (**31.58 million US dollars**) to the state budget. FAS deemed MTS's tariff increase this spring, which affected 30 million subscribers, as unjustified and instructed the operator to transfer 3 billion rubles to the budget. The agency emphasized that this is the first instance of such enforcement practice being applied.

Бизнес, 14 окт, 10:02 | Поделиться ↗

## ФАС обязала МТС снизить тарифы и заплатить в бюджет 3 млрд руб.

ФАС признала необоснованным повышение тарифов МТС этой весной, затронувшее 30 млн абонентов, и предписала оператору перечислить 3 млрд руб. в бюджет. В ведомстве подчеркнули, что это первый случай правоприменения такой практики

МТС MTSS P206,2 +0,32% [купить](#)

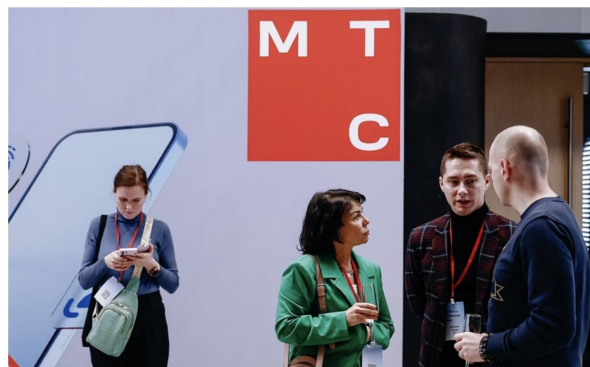
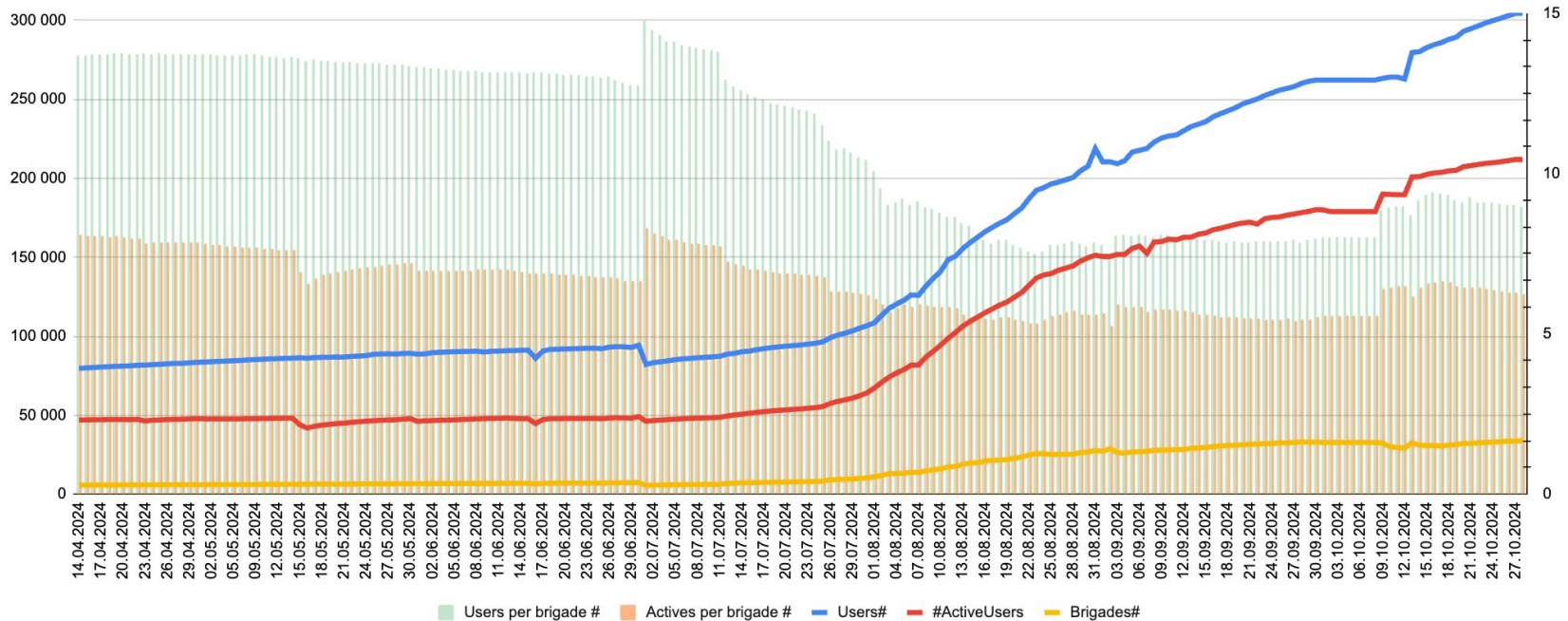


Фото: Андрей Любимов / РБК

# VPN Generator - a project to break the 'digital blockade'

## VPN Generator dynamics



# PRODUCT

VPN.GENERATOR



VPN.GENERATOR

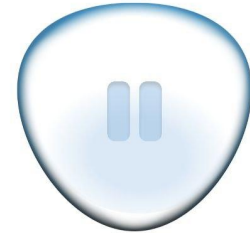
Привет, 028 Хозяйственный  
Агостини

Сортировка: [icon] Статус: [icon]

Поиск

Добавить

 <b>028 Хозяйственный Агостини</b> Последний визит: 14.07.2024 - 23:00 Лимит трафика: 96.75 GB Статус: ● Всё отлично!	 <b>237 Воспитительная Карман</b> Последний визит: 15.07.2024 - 07:00 Лимит трафика: 97.33 GB Статус: ● Всё отлично!	 <b>172 Образованный Лутули</b> Лимит трафика: 100 GB Статус: ● Мёртвая душа	 <b>054 Идеальный Картер</b> Лимит трафика: 100 GB Статус: ● Мёртвая душа
 <b>063 Отличный Гор</b> Лимит трафика: 100 GB Статус: ● Мёртвая душа	 <b>227 Заветная Ресса</b> Лимит трафика: 100 GB Статус: ● Мёртвая душа	 <b>083 Ледовый Банч</b> Последний визит: 15.07.2024 - 03:00 Лимит трафика: 99.6 GB Статус: ● Всё отлично!	 <b>252 Ликующий Клерк</b> Последний визит: 13.07.2024 - 22:00 Лимит трафика: 99.95 GB Статус: ● Всё отлично!
 <b>058 Искусная Чжи</b> Последний визит: 15.07.2024 - 06:00 Лимит трафика: 99.99 GB Статус: ● Всё отлично!	 <b>166 Снисходительный Беляцкий</b> Последний визит: 14.07.2024 - 21:00 Лимит трафика: 99.78 GB Статус: ● Всё отлично!	 <b>035 Убежденный Обама</b> Лимит трафика: 100 GB Статус: ● Мёртвая душа	 <b>126 Защищенная Тереза</b> Последний визит: 15.07.2024 - 06:00 Лимит трафика: 99.99 GB Статус: ● Всё отлично!



VPN включен

↑ 0.00 mb/s

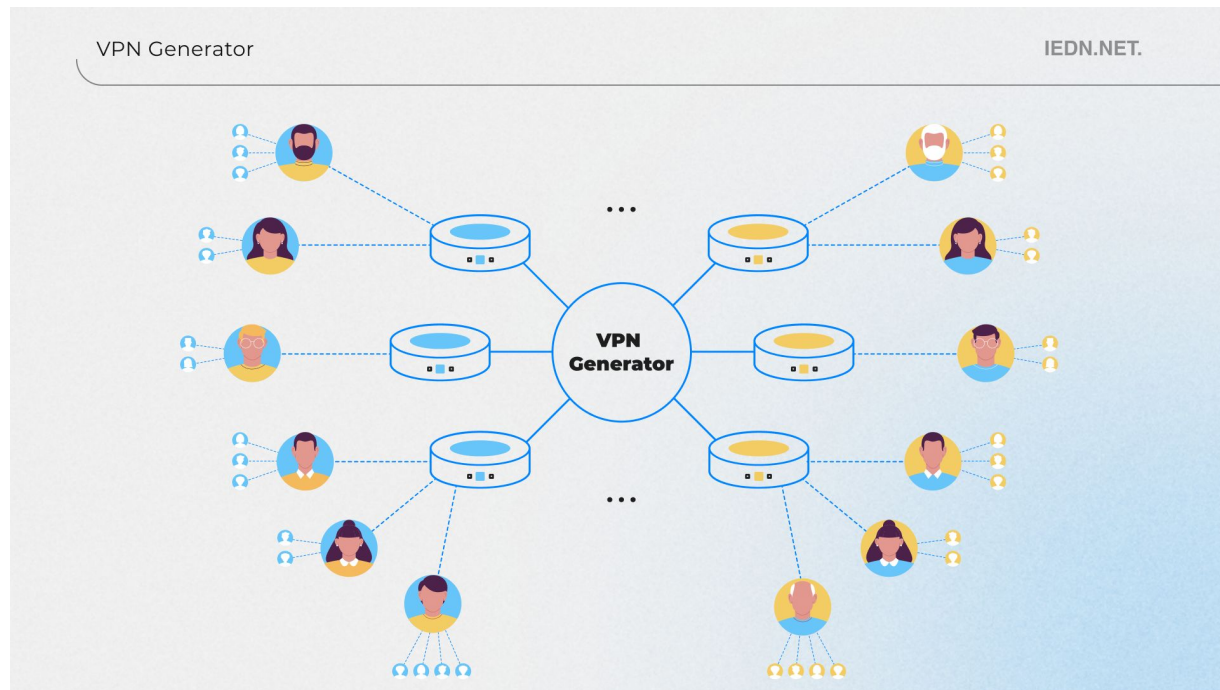
↓ 0.00 mb/s

[Link to Play Market](#)

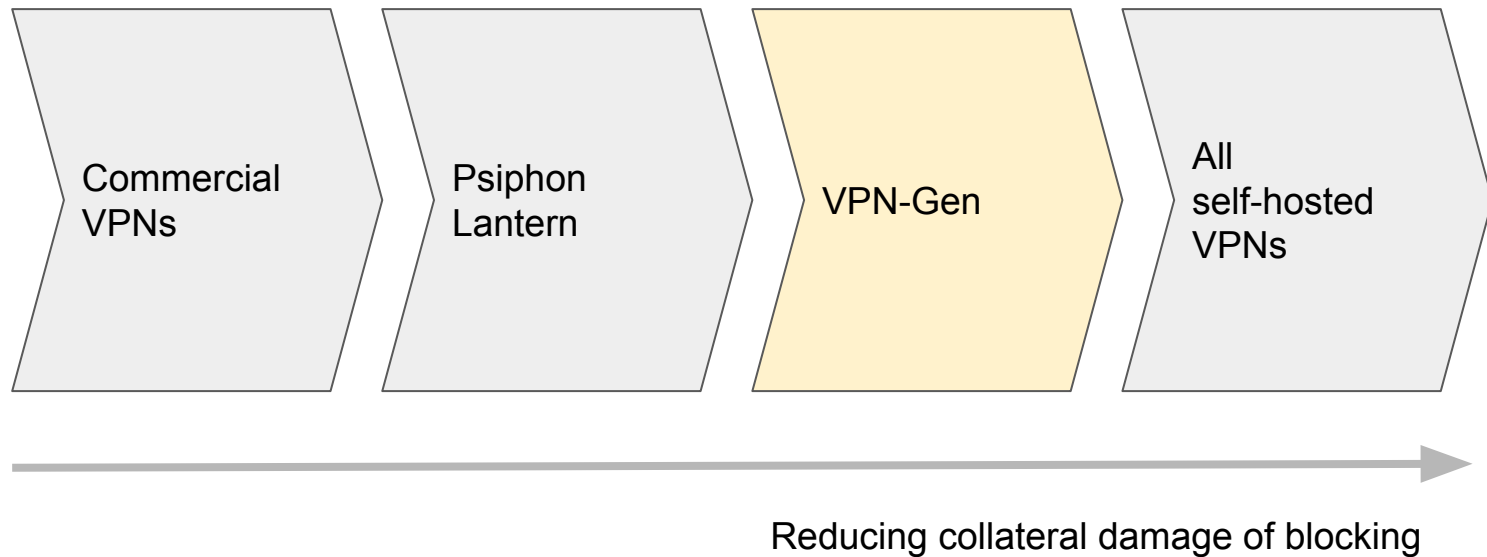
# How it works

VPN Generator is not just another VPN. It **creates** just another VPN's.

Leaving the possibility to spread it to it's users the way they see fit for free.



# How it works





# What we\* need right now

- IP-addresses
- Hardware, VMs & bandwidth

\*) non-profit organization in Germany

## RFCs fighting censorship

- ✓ – DNS over HTTPS
- ✓ – Encrypted ClientHello (WOW! Chrome+Cloudflare)
- ? – QUIC & MASQUE
- ✓ – RFC 9620

Guidelines for Human Rights Protocol and Architecture  
Considerations

Mikhail Klimarev  
[klimarev@gmail.com](mailto:klimarev@gmail.com)  
[https://t.me/wanderer\\_from](https://t.me/wanderer_from)  
Signal: Klimarev.73



[https://bit.ly/VPNGen\\_RIPE89](https://bit.ly/VPNGen_RIPE89)