OONI Report for Azerbaijan Internet Watch **September 2022 Update**

This report provides an update based on the analysis of OONI measurements collected from Azerbaijan between **May 2022 to September 2022**.

Findings

Blocked websites

Ongoing blocking of news media websites in Azerbaijan

Independent news media websites continue to be blocked in Azerbaijan.

OONI data collected from local networks in Azerbaijan between 1st May 2022 to 28th September 2022 primarily presents signs of blocking for the following 8 news media websites:

- azerbaycansaati.tv
- ria.ru
- www.abzas.net
- www.azadliq.info
- www.azadliq.org
- www.kanal13.tv
- www.meydan.tv
- www.rferl.org

The following chart aggregates OONI measurement coverage from Azerbaijan between May 2022 to September 2022, illustrating the blocking of these news media websites.

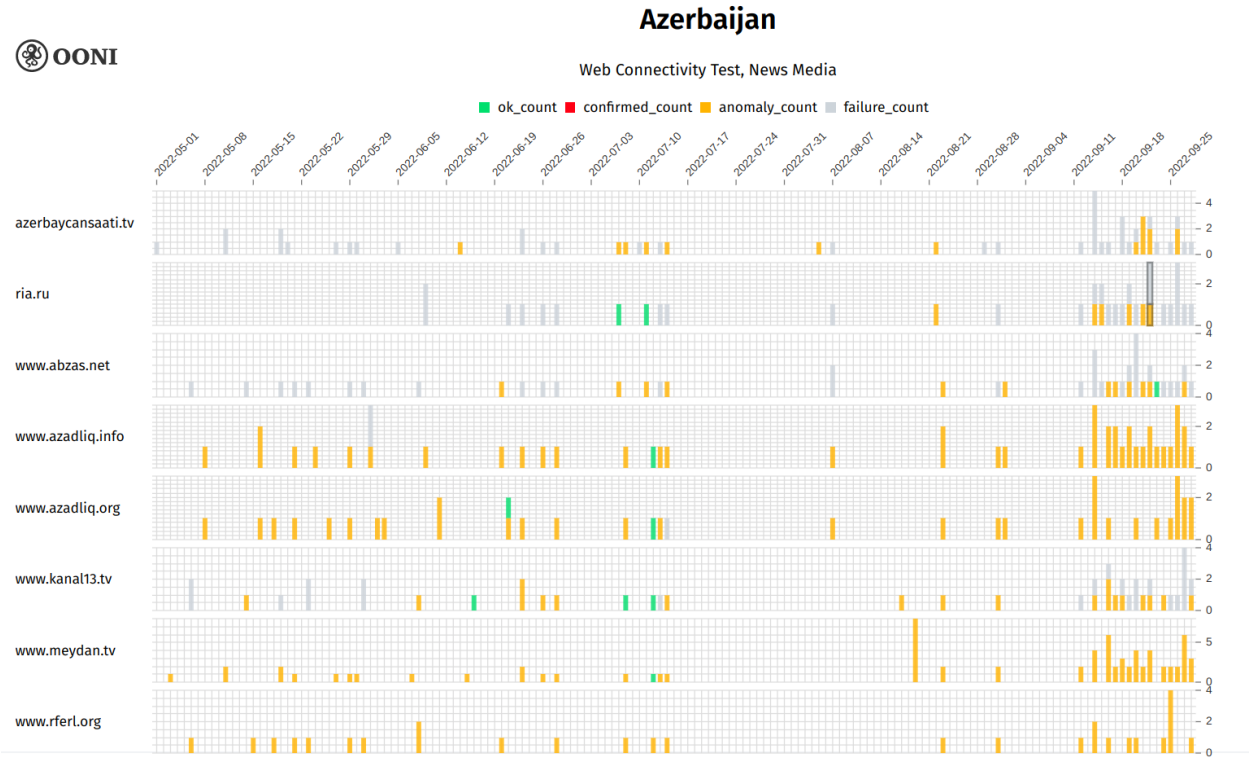

Chart: OONI data on the blocking of news media websites in Azerbaijan between May 2022 to September 2022 (source: OONI MAT).

The news media websites listed in the above chart also presented signs of blocking as part of previous OONI data analysis shared in past quarterly reports (as well as in our 2021 joint report). OONI data therefore suggests that these media websites have been blocked in Azerbaijan since at least January 2020.

We observe variance in the techniques being used to implement the blocks. Specifically, we observe variance in how blocks are implemented for sites hosted on HTTP and those on HTTPS. For sites hosted on HTTP, OONI data shows that connections are closed, timeout, or result in a generic failure. For sites hosted on HTTPS, OONI data shows that the TLS connection is reset, closed, or times out. In some cases, we also observe DNS based interference.

The following chart (aggregating OONI measurement coverage between May 2022 to September 2022) shows the local networks in Azerbaijan where the blocking of news media websites was observed the most.

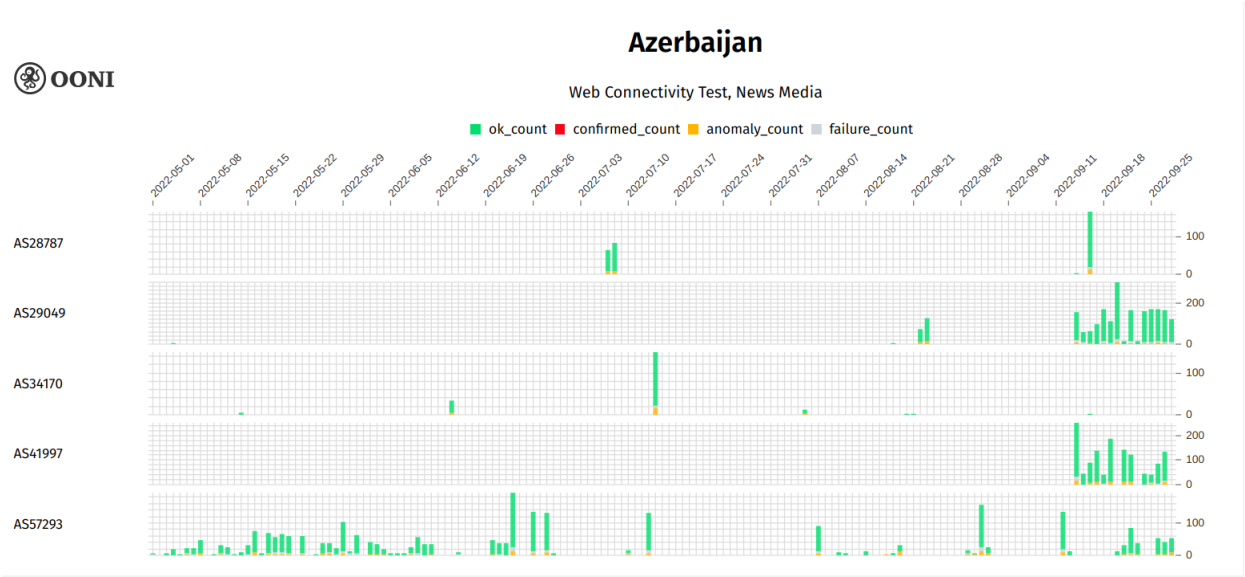

Chart: OONI data from ASNs where the blocking of news media websites was observed in Azerbaijan the most between May 2022 to September 2022 (source: OONI MAT).

These networks include Baktelekom (AS28787), Delta Telecom (AS29049), Aztelekom (AS34170), and AG Telekom (AS57293). However, it's worth noting that most news media websites that were tested in Azerbaijan throughout the analysis period were found to be accessible (as illustrated through the above chart).

The ongoing blocking of news media websites in Azerbaijan can be tracked through real-time data (and charts) provided by OONI's Measurement Aggregation Toolkit (MAT).

Azerbaijani news media websites blocked in Russia

In June 2022, we were informed that certain Azerbaijani news media websites (baku.ws, haqqin.az, minval.az, oxu.az, ru.baku.ws, ru.oxu.az) were reportedly blocked in Russia. On 7th June 2022, we added these URLs to the Russian test list so that these websites could get tested by OONI Probe users in Russia.

OONI data collected from Russia confirms that 5 out of these 6 Azerbaijani websites have been blocked in Russia in recent months, as illustrated below.

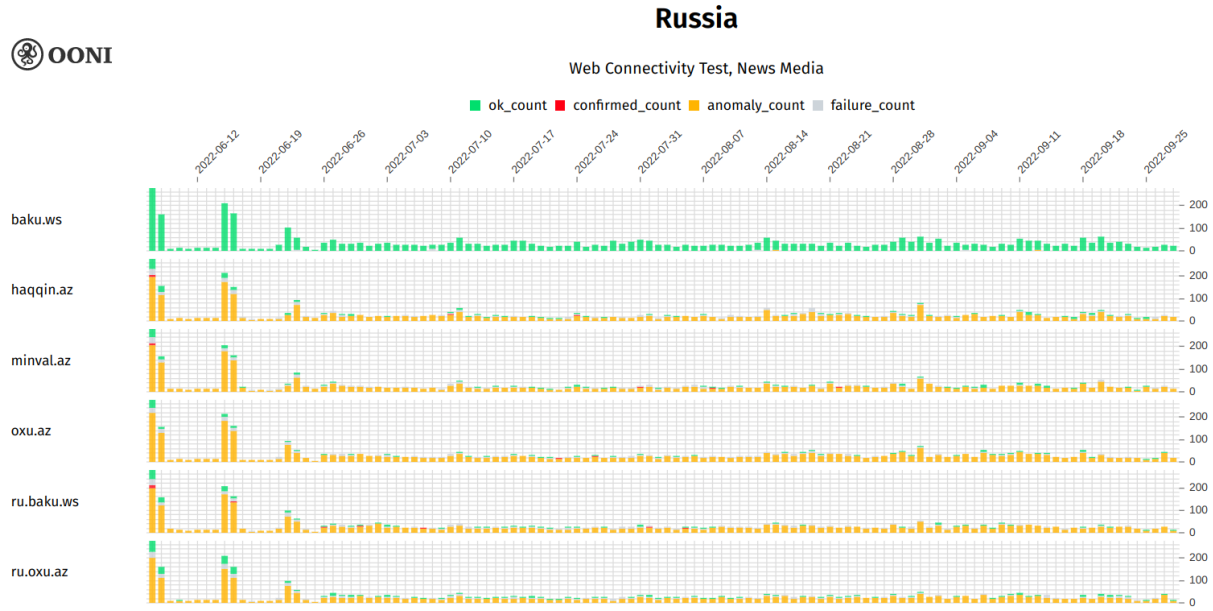

Chart: OONI data on the blocking of Azerbaijani news media websites in Russia between June 2022 to September 2022 (source: OONI MAT).

The above chart aggregates OONI measurement coverage from numerous networks in Russia, showing that at least 5 Azerbaijani media domains were blocked in Russia between June 2022 to September 2022. While we observe blocking of ru.baku.ws, the testing of baku.ws shows that it was accessible, suggesting that Russian ISPs prioritized blocking the Russian language edition of this news website. Russian ISPs adopt a variety of censorship techniques and, on some networks, we are able to automatically confirm the blocking of these Azerbaijani news websites.

Ongoing blocking of circumvention tool websites

Numerous circumvention tool websites continued to present signs of blocking in Azerbaijan during the testing period.

The following chart shares aggregated OONI measurement coverage for popular circumvention tool sites that presented a large volume of anomalies throughout the testing period in Azerbaijan.

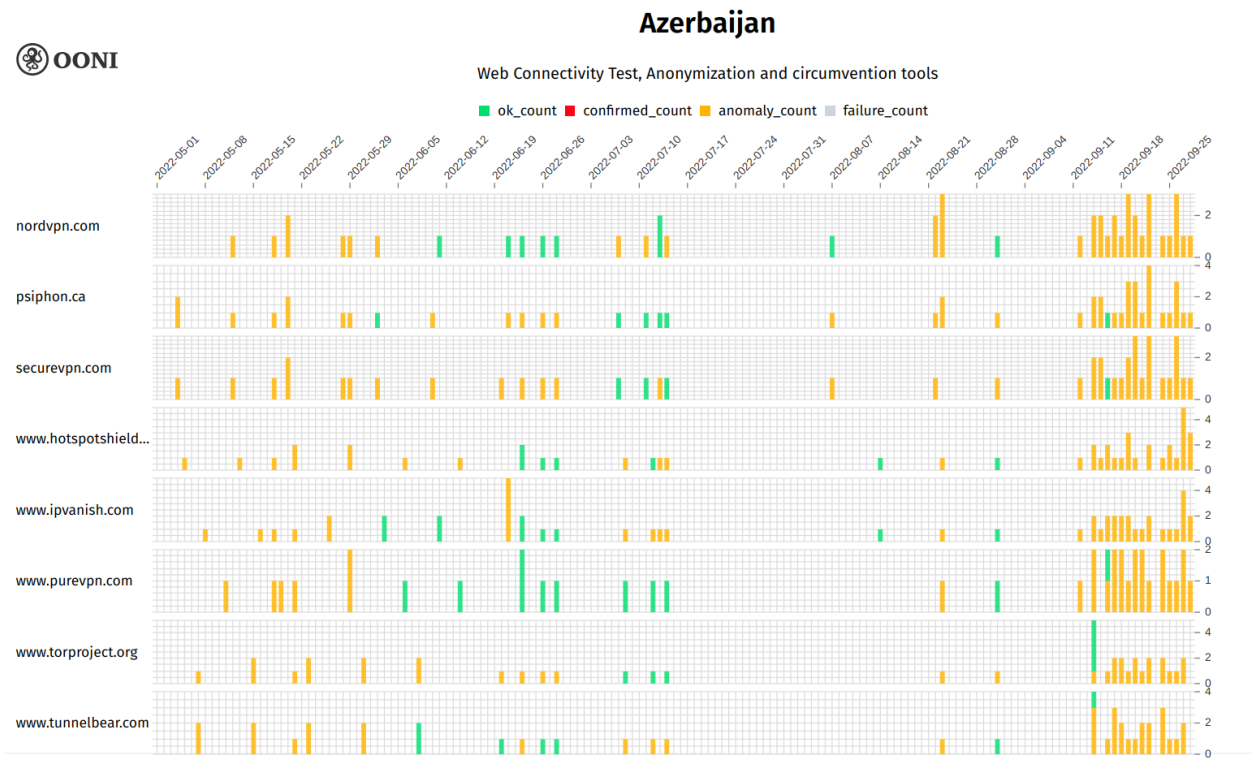

Chart: OONI data on the blocking of circumvention tool websites in Azerbaijan between May 2022 to September 2022 (source: OONI MAT).

Multiple circumvention tool websites continue to show signs of blocking on some networks in Azerbaijan, as illustrated through the above chart. Specifically, OONI data shows that when these sites were tested, we frequently observed the timing out of the session after the ClientHello during the TLS handshake. It's worth noting though that these sites are not blocked on all networks in Azerbaijan, as some measurements were successful.

The ongoing blocking of circumvention tool websites in Azerbaijan can be tracked through real-time data (and charts) provided by OONI's Measurement Aggregation Toolkit (MAT).

TikTok blocked in Azerbaijan and Armenia amid border clashes

Amid border clashes, both Azerbaijan and Armenia started blocking access to TikTok by 13th September 2022. Details are included in our joint report, published on 16th September 2022.

The following chart (based on OONI data) shows the blocking of TikTok endpoints in Azerbaijan between 13th- 16th September 2022.

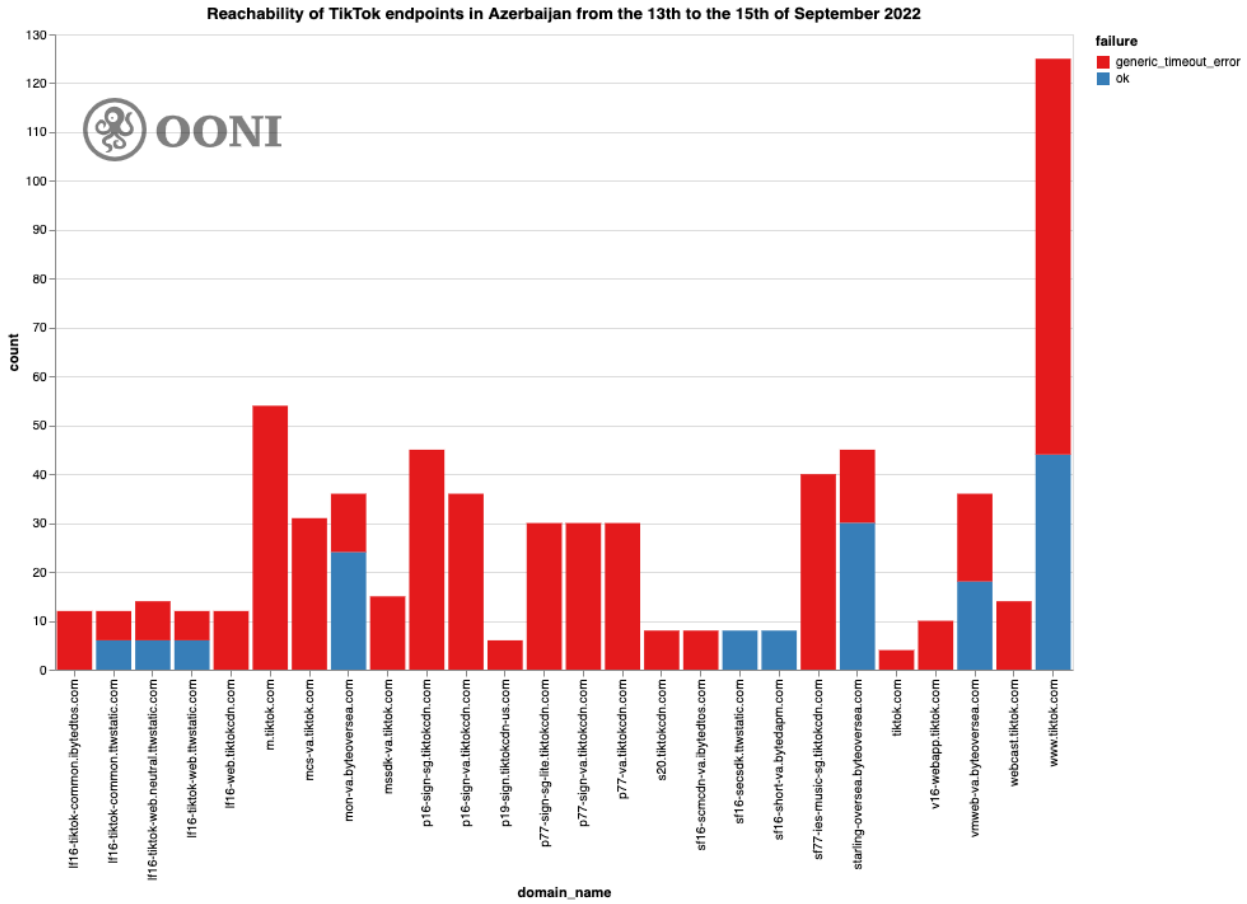

Chart: OONI data on the testing of tiktok.com and TikTok endpoints in Azerbaijan between 13th-15th September 2022.

As is evident from the above chart, the testing of www.tiktok.com and Tiktok endpoints presented a relatively large volume of anomalies in Azerbaijan between 13th to 15th September 2022, following the eruption of border clashes on 12th September 2022.

Similarly, OONI data shows the blocking of TikTok endpoints in Armenia during the same dates.

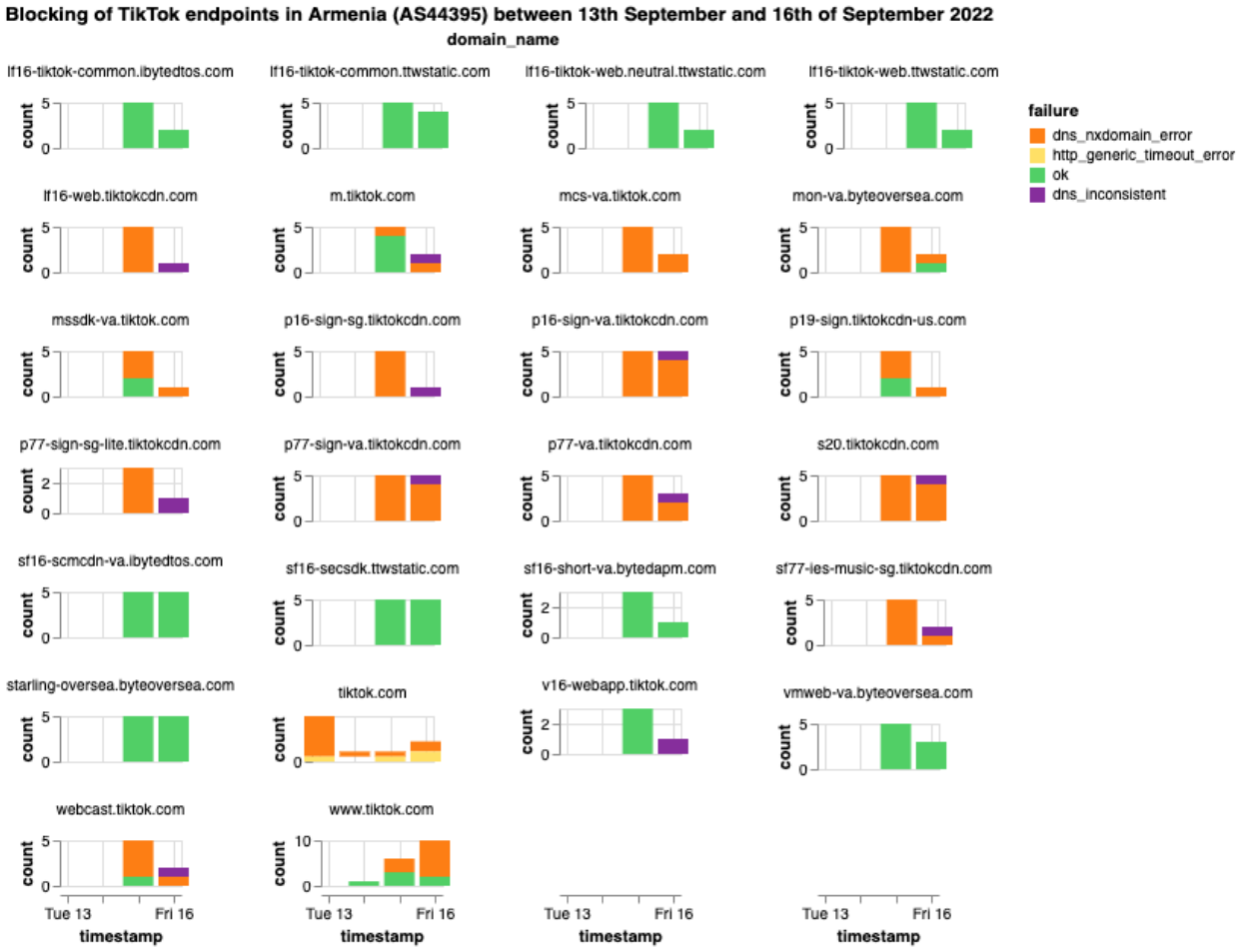

Chart: OONI data on the testing of TikTok endpoints on Ucom (AS44395) in Armenia between 13th-16th September 2022.

When looking at more recent measurements, we observe that TikTok appears to have been unblocked in Armenia, but remains blocked in Azerbaijan.

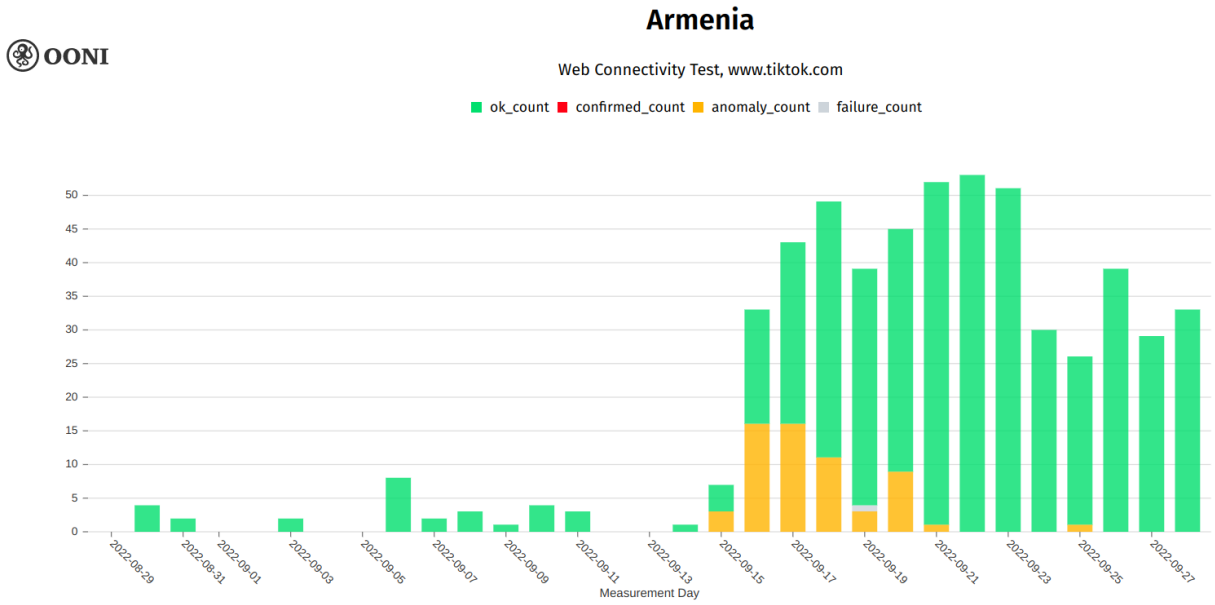

Chart: OONI data suggests that TikTok has been unblocked in Armenia (source: OONI MAT).

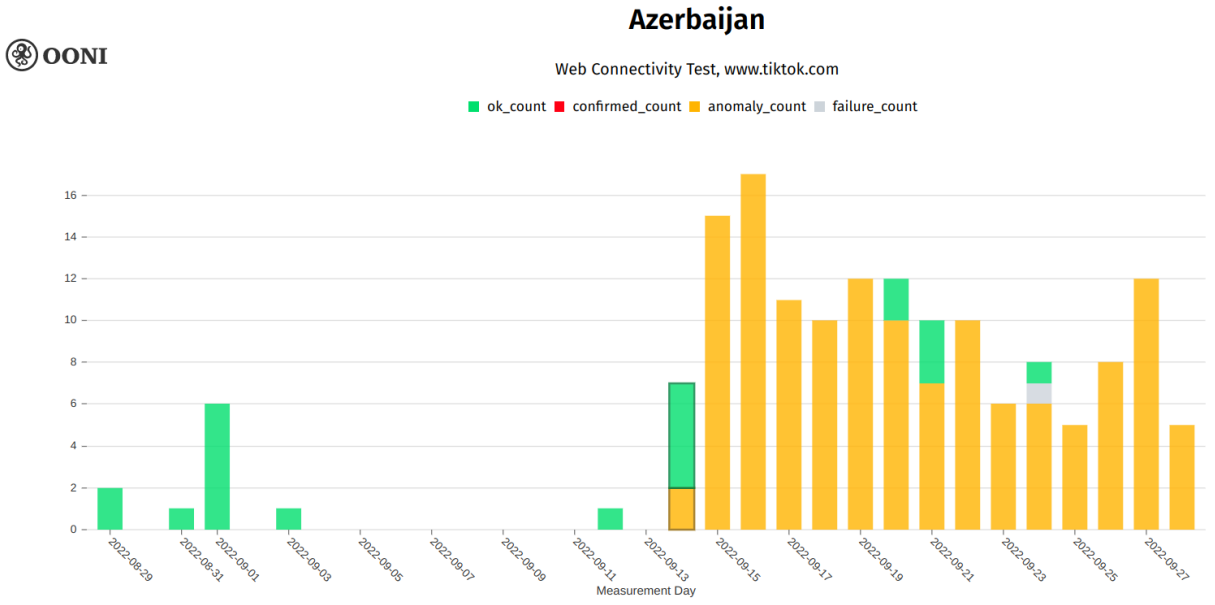

Chart: OONI data suggests that TikTok remains blocked in Azerbaijan (source: OONI MAT).

OONI Probe testing of instant messaging apps

While a number of news media and circumvention tool websites continued to present signs of blocking in Azerbaijan, the tested instant messaging apps were mostly found accessible.

Apart from the testing of websites, OONI Probe also includes tests designed to measure the blocking of the following instant messaging apps:

- WhatsApp;
- Facebook Messenger;
- Telegram;
- Signal.

OONI measurements collected from these tests show that these apps were mostly reachable (from several networks) in Azerbaijan between May 2022 to September 2022. This is illustrated through the following charts.

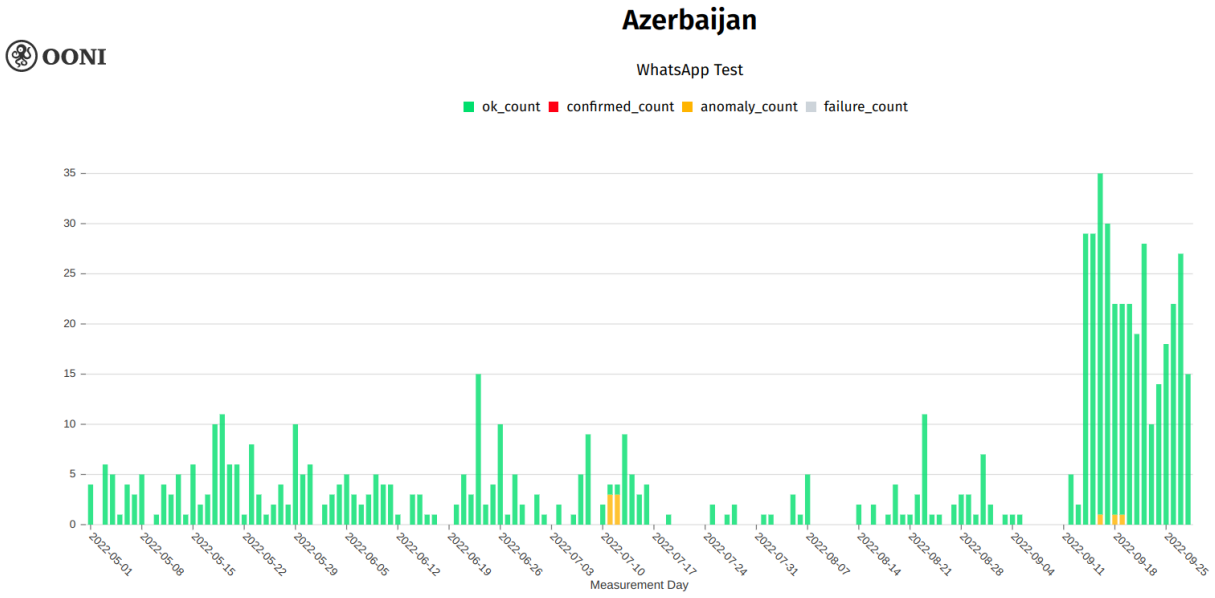

Chart: OONI Probe testing of WhatsApp in Azerbaijan between May 2022 to September 2022 (source: OONI MAT).

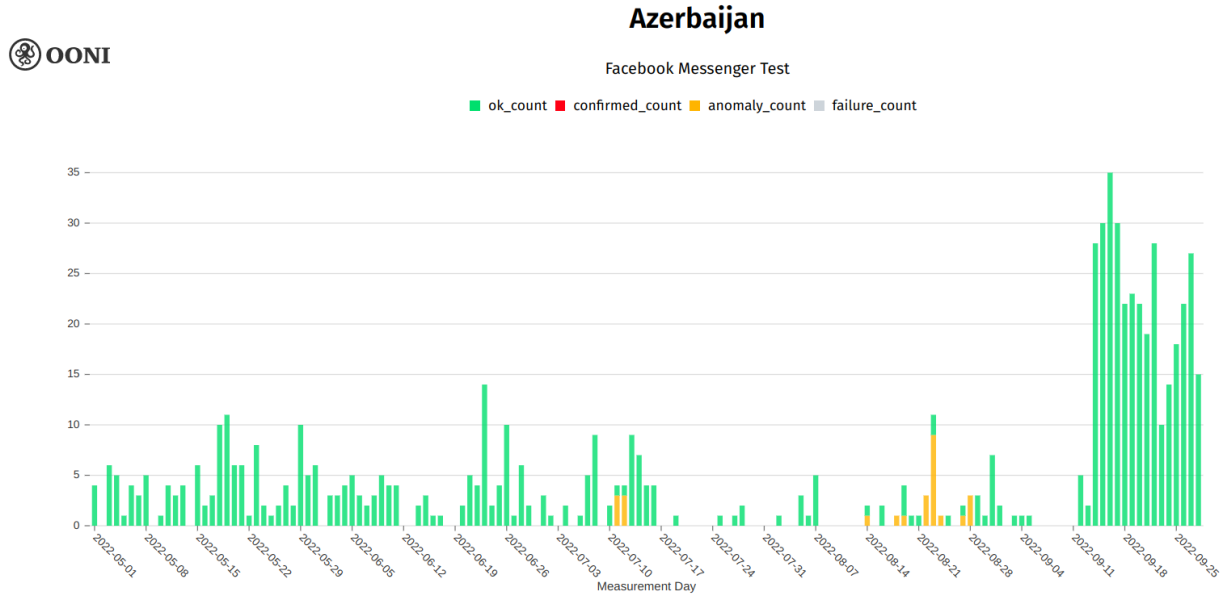

Chart: OONI Probe testing of Facebook Messenger in Azerbaijan between May 2022 to September 2022 (source: OONI MAT).

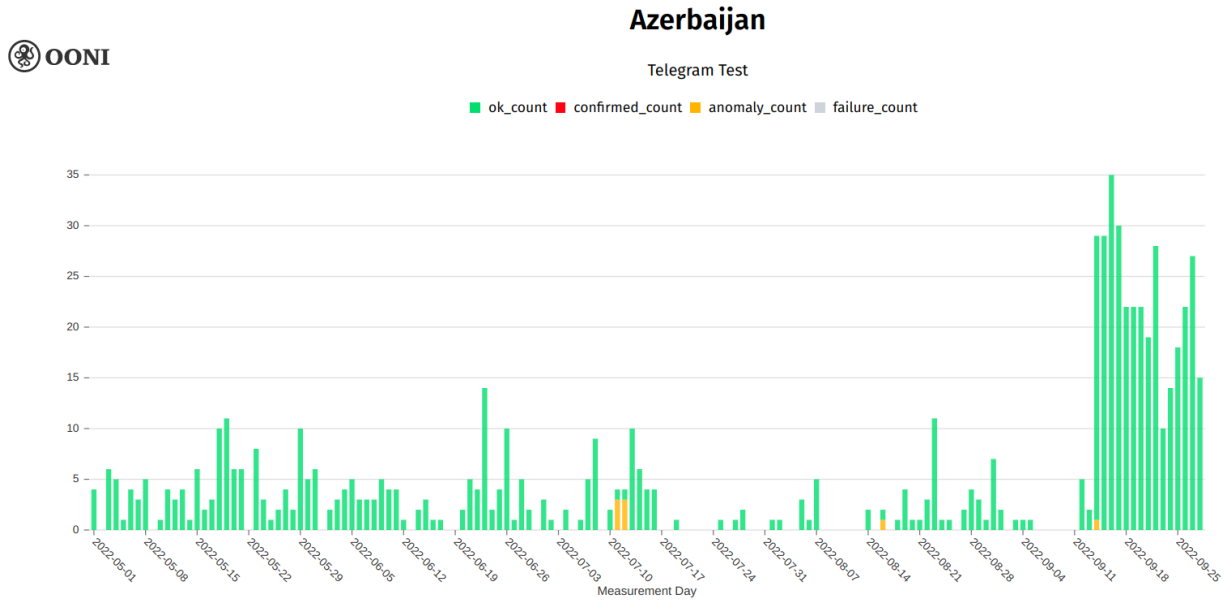

Chart: OONI Probe testing of Telegram in Azerbaijan between May 2022 to September 2022 (source: OONI MAT).

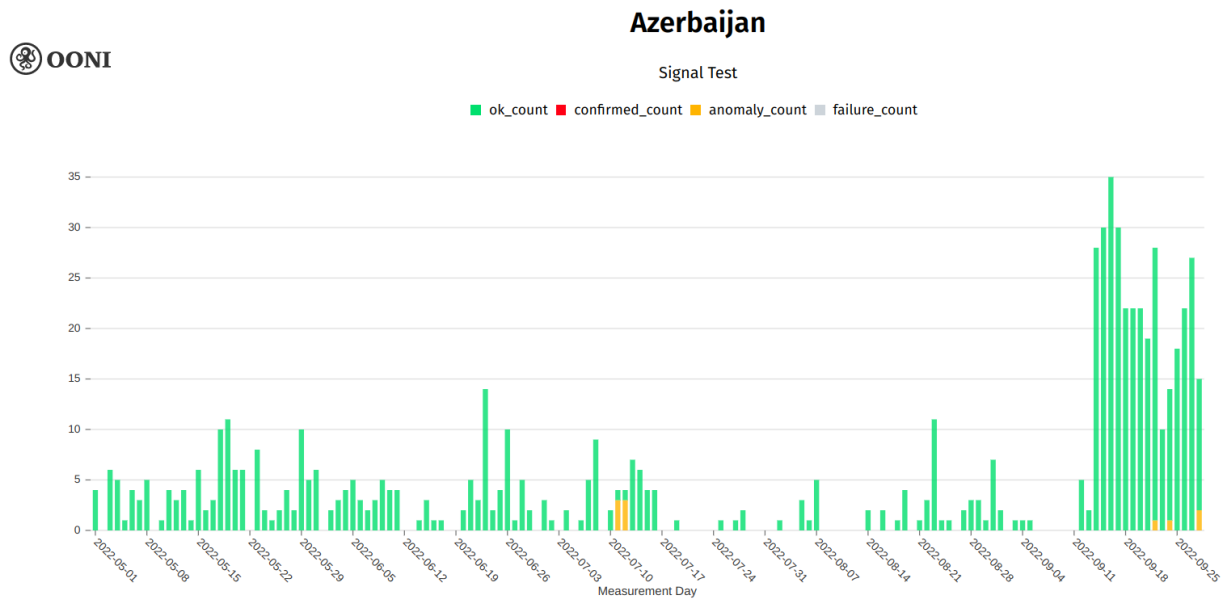

Chart: OONI Probe testing of Signal in Azerbaijan between May 2022 to September 2022 (source: OONI MAT).

While the above charts show the presence of anomalous measurements in July-August 2022, the limited testing coverage limits our ability to determine if they are indicators of true blocking or false positives. The fact that most measurements throughout the testing period were successful suggests that WhatsApp, Facebook Messenger, Telegram, and Signal apps were reachable on tested networks in Azerbaijan.

OONI Probe testing of circumvention tools

OONI Probe also includes tests designed to measure the reachability of the Psiphon, Tor and Tor Snowflake circumvention tools.

Between May 2022 to September 2022, OONI Probe testing of Psiphon showed that it was reachable on tested networks in Azerbaijan, as illustrated below.

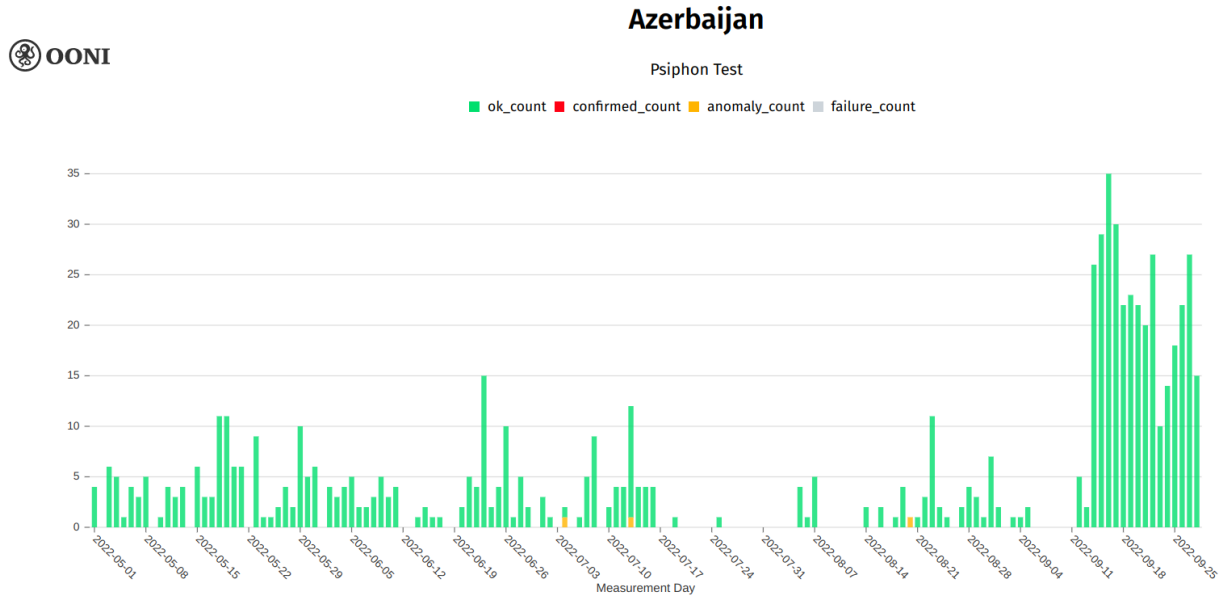

Chart: OONI Probe testing of Psiphon in Azerbaijan between May 2022 to September 2022 (source: OONI MAT).

Most measurements collected during the testing period showed that it was possible to bootstrap Psiphon and use it to fetch a webpage, suggesting that the circumvention tool worked on tested networks.

While Tor testing previously presented a large volume of anomalies, OONI data shows that Tor was mostly reachable on tested networks in Azerbaijan between May 2022 to September 2022 (particularly over the last month).

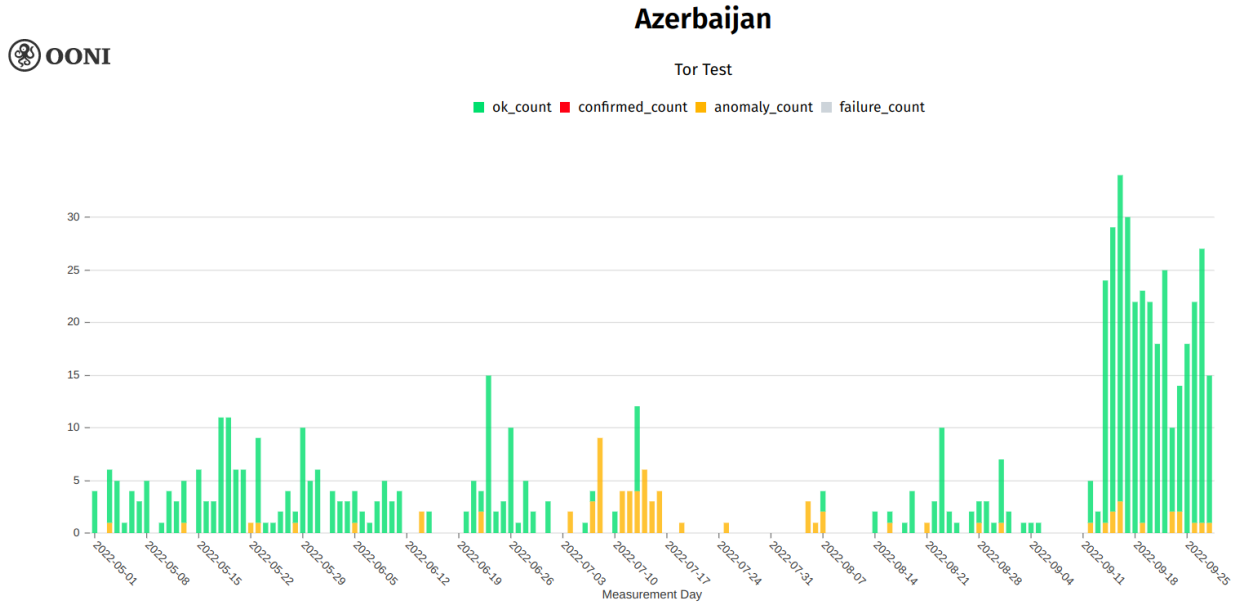

Chart: OONI Probe testing of Tor in Azerbaijan between May 2022 to September 2022 (source: OONI MAT).

In Tor anomalous measurements, we see that attempted connections to Tor directory authorities failed on some networks. However, we also see that many connections to both Tor directory authorities and Tor bridges were successful (on many networks), indicating that it may have been possible to use Tor in Azerbaijan.

Quite similarly, OONI data shows that it was possible to bootstrap Tor Snowflake on most networks in Azerbaijan through the testing period.

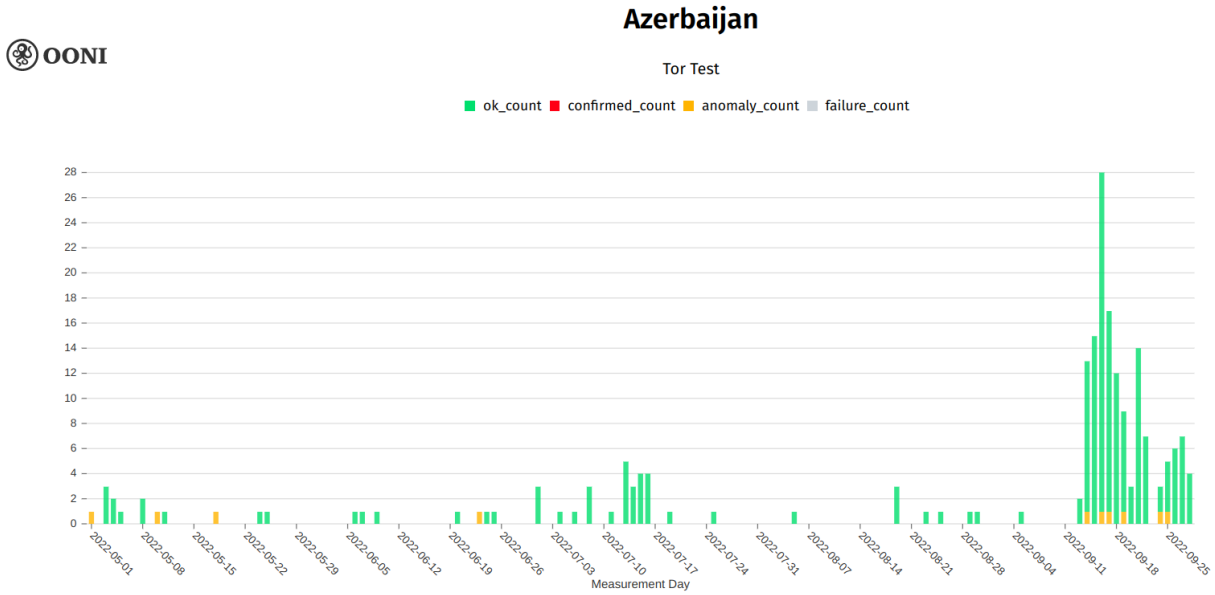

Chart: OONI Probe testing of Tor Snowflake in Azerbaijan between May 2022 to September 2022 (source: OONI MAT).

This suggests that while the Psiphon and Tor Project websites might be blocked in Azerbaijan (as discussed previously), their tools appear to work in the country (at least on tested networks).

Conclusion

News media and circumvention tool websites continue to be blocked in Azerbaijan. To expand censorship detection capabilities over the next quarter, the following next steps would be helpful:

1) **Review and update of the test list for Azerbaijan.** This can be done through OONI's new web platform, where community members can add, edit, and/or remove URLs for testing. Updating the list would help improve the quality of website testing in Azerbaijan.
2) **Further automated OONI Probe testing in Azerbaijan.** OONI Probe users can enable automated testing (in both OONI Probe Mobile and OONI Probe Desktop) to have tests run automatically every day (without having to remember to run tests).