



THE IMPACT OF U.S. SANCTIONS ON INTERNET ACCESS IN IRAN

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Overview

- U.S. sanctions are making it easier for the Iranian government to censor, surveil, and repress its population.
- Major internet services and platforms like [Google Cloud](#), [Amazon Web Services](#), [Digital Ocean](#), and the [Apple App Store](#) have all pulled out of the Iranian market in recent years as a result of U.S. sanctions.
- Iranian citizens are losing access to tools they need to circumvent government filters at a time when Iranian authorities are [intensifying their drive](#) to securitize online space inside Iran.
- Sanctions are abetting the Iranian government's "national internet" project, which gives the government the ability to sever access to the global internet while keeping domestic platforms and services online.
- The U.S. Treasury Department's [General License D-1](#) has failed to reassure companies afraid of violating sanctions and is out of date with modern personal communication tools and services.
- The U.S. can alleviate this problem and support internet communications for Iranians by updating and clarifying General License D-1 to make clear what technologies are allowable, simplifying the license process for companies seeking to provide tools and services to Iranians, and providing public assurances and comfort letters for companies to engage Iranians.

Introduction

The protests that broke out in Iran's southwestern Khuzestan province this summer followed a familiar pattern. Iranian citizens took to the streets to air grievances they have with the status quo, in this case dire water shortages intensified by mismanaged water resources and climate change.

The Iranian government in turn responded with an internet outage and deadly force and repression to quell the public outpouring of discontent, as has happened with increasing frequency when Iranians publicly voice their discontent. What may come as a shock to many, however, is the role U.S. sanctions have played in inadvertently helping Iran's government censor, surveil, and repress its population.

The United States has long maintained sanctions that prevent any U.S.-based companies from doing business with Iran. These sanctions predate high-level multilateral negotiations over Iran's nuclear program and were not lifted as part of the 2015 nuclear deal. They have led many U.S. technology companies, such as Apple, Amazon, and Google, to deny Iranians access to tools and services that are vital to modern online communications. The result is that Iranians increasingly lack the tools they need to circumvent government filters and have no choice but to use state-backed platforms, servers, and data infrastructure.

The sanctions have played right into the hands of Iran's government, which has heavily invested in a "national internet" project to tightly control internet communications and cut off access to the global internet at its discretion and at a relatively lower cost for the country's economy. This happened during the November 2019 gas-price hike protests, when access to the global internet was severed on a country-wide level for 10 days.

The government did this while at the same time keeping the domestic internet online, allowing many economic activities that require the internet to remain connected (i.e. hospitals, banks, local businesses, and governmental platforms).

The U.S. must amend its sanctions on Iran to counter a state drive that has been continuous in Iran, but can be expected to worsen in the tenure of conservative President Ebrahim Raisi. The U.S. has an obligation to make sure its sanctions are not reinforcing the Iranian government's ability to censor, repress and silence its population.

As President Biden has [stated](#): "Whatever our profound differences with the Iranian government, we should support the Iranian people." Access to the internet must be viewed as a fundamental human right in the modern world and is vital to bolstering freedom of expression in repressive states such as Iran.

This whitepaper explains how U.S. sanctions are harming the ability of the Iranian people to access online communications tools and services and outlines steps that the Biden administration can take to remedy this situation.

History

The 2009 contested Iranian election was a watershed moment in major ways for Iranian civil society and dissident politics inside the country. The ensuing Green Movement saw millions of Iranians march in the streets and voice their grievances in the face of severe government repression.

Countless more Iranians took to social media to spread their message of “Where is my vote?” across the world. As Iranians were taking to online platforms to voice their beliefs, U.S. sanctions were aiding the Iranian government’s efforts to silence its people. At the time, Microsoft and Google had already [shut down](#) essential communications tools for Iranians and Facebook and Twitter were [contemplating](#) doing the same.

In 2009, NIAC [worked](#) extensively with members of Congress and Executive Branch officials to ensure that U.S. sanctions did not infringe on the Iranian people’s basic rights to access information and communications tools. By December of that year, the State Department requested the Office of Foreign Assets Control (OFAC) to authorize the export to Iran of software necessary for the exchange of personal communications or for sharing of information over the internet, such as instant messaging and social networking. “U.S. sanctions on Iran are having an unintended chilling effect on the ability of companies such as Microsoft and Google to continue providing essential communications tools to ordinary Iranians,” the State Department [stated](#).

The Obama administration subsequently took a series of additional steps to ensure that U.S. sanctions were not unintentionally contributing to restricted internet access for Iranians. This included: lifting sanctions on [additional categories](#) of internet communication tools in 2012, issuing [General License D](#) to broadly authorize the export of personal communications tools and services to Iran in 2013, and updating this with General License D-1 in 2014.

These sanctions exemptions led to companies such as Apple and Google restoring most of their services and, while some issues continued to exist, there was largely a favorable environment where companies provided access to Iranians in spite of these remaining ambiguities and sanctions risks.

The onset of the Trump administration saw many of the gains in communications technology access for Iranians rapidly reverse. As Trump reneged on the 2015 nuclear deal and imposed new sanctions, any ambiguities with GL D-1 became massive liabilities with companies worried of being accused of violating sanctions by the Trump White House.

Many tools and services that were restored a few years earlier were cut off again and many more platforms were cut off for the first time. The Trump era [saw](#) Apple remove its app stores for Iranian users, Amazon [bar](#) Iranians from hosting sites on its ubiquitous Amazon Cloud, and Google [take](#) similar steps to deny Iranian users access to most of its services, including those required to circumvent Iranian government censors.

Today, the access of Iranian users to international communications tools and services is significantly worse than it was just a few years ago.

How Current Sanctions Policy Helps the Iranian Government's Repression

U.S. sanctions and the inadequacies of General License D-1 have served to make Iranian internet users more vulnerable. Internet access is already heavily regulated by the Iranian government, with many foreign websites blocked.

In a country where free expression or political associations can lead to a prison sentence, Iranian activists rely on virtual private networks (VPNs) to circumvent government filters. U.S. sanctions have reduced access to these circumvention tools and harm Iranians' internet security in the following ways:

Iranians are being denied tools they need to circumvent government filters

- VPNs require a neutral site (global cloud infrastructure) to operate. Otherwise, an individual is at risk of running a VPN on a system the government can access.
- Many of the VPNs and other circumvention tools Iranians require to bypass government filters are hosted on platforms such as Google Cloud, Amazon Web Services, and DigitalOcean, which are inaccessible due to sanctions.
- As Iranian internet security and digital rights expert Amir Rashidi told NIAC on a recent panel, the Iranian government is trying to move Iranians onto its own VPNs to enhance its censoring capabilities. Rashidi **said**: "The plan is actually giving people legal VPN which is basically trying to increase the blocking, increase blocking convention tools as much as possible."
- As a result of U.S. sanctions, Iranians increasingly have to rely on insecure circumvention tools that compromise their online data and security.

Sanctions force Iranians on to state servers and data infrastructure

- With sanctions denying Iranians the ability to use outside communications tools and services, Iranians must turn to products made in the country that the government can easily control and surveil.
- The Iranian government is pursuing broad efforts to provide domestic substitutes for international technological products, including data centers, social media applications, and hosting services.
- Sanctions have given the government a ready-made excuse to bolster these platforms and current legislation in the Iranian parliament would effectively force Iranians on to these platforms.

Sanctions help the Iranian government's "national internet" project and ability to sever access to the global internet

- The Iranian government has for years invested in boosting domestic internet infrastructure and creating a "national internet" that is independent of the global internet. This project [made significant gains](#) during the Hassan Rouhani presidency.
- Sanctions have abetted the Iranian government's national internet project by leaving Iranian internet users and businesses no choice but to use domestic platforms and data centers.
- The national internet project reduces the cost (economic and otherwise) associated with shutting down access to the global internet. The over week-long internet shutdown after widespread protests in November 2019 occurred while domestic internet services were kept online, including for key sectors such as banking, healthcare, and government.
- Many Iranians fear that the government has created the infrastructure necessary to eventually close Iran's access to the global internet permanently.

- On top of the effect of sanctions, Iran’s conservative parliament in July 2020 took a key legislative step forward to “experimentally” [implement a law](#) that would further limit access to foreign platforms and websites, push Iranians onto domestic data infrastructure, replace foreign social media platforms with domestic versions, and make the sale of non-approved VPNs punishable by fines or imprisonment.

Limitations of Treasury Department's General License D-1

The Treasury Department introduced General License D-1 in 2014 to reduce the impact of sanctions on internet communications for Iranians.

This updated license permitted the sale of “personal communications tools and services” to Iranians and was a welcome step at the time that recognized the importance of these technologies in assisting civil society and freedom of expression in Iran. However, General License D-1 has offered diminishing assurance to U.S. companies providing their tools and services to Iranians. The limitations of General License D1 are multifold:

General License D-1's ambiguities have created fear among companies of sanctions violations

- Many U.S.-based technological companies have denied tools and services to Iranians to minimize the risk of running afoul of sanctions.
- This derives from the lack of clarity in General License D-1, which includes a [list](#) of services, software, and hardware that are considered “incident to personal communications,” but this list is incomprehensive.

General License D-1 is out of date with current communications technologies

- It has been seven years since General License D-1 was implemented, during which internet communications technologies have evolved in significant ways. It is currently out of date with current technologies that are central to internet communication today, such as cloud and hosting infrastructure that are necessary for secure online communications.

Tools and Services Currently Denied to Iranians



APPLE

In 2018, Apple began **denying** Iranians access to the Apple store. This was **preceded** by Apple blocking Iranian applications on its iPhone storefront, despite these applications taking steps to abide by sanctions regulations. Iranians also **cannot obtain** an Apple ID, which limits their ability to use iPhones. Apple has said it made these decisions to **comply** with U.S. sanctions, stating: “Under the US sanctions regulations, the App Store cannot host, distribute, or do business with apps or developers connected to certain US embargoed countries.”



GOOGLE

Google’s Android developer tools and services, cloud platform, and App Engine are **blocked** for Iranians. These limitations make it difficult for Iranian entrepreneurs and developers to get their apps off the ground and make it more difficult for Iranian users to circumvent government filters using virtual proxy networks. Google has cited U.S. sanctions for not being able to “host, distribute, or do business with apps or developers connected to certain US embargoed countries.”



AMAZON

In 2019, Amazon **blocked** Iranians from using their Web Services, which impacts a whole host of technological services for individuals and businesses, including cloud hosting. Amazon’s stated reasoning is “because Iran is subject to broad trade restrictions, limiting virtually all business with Iran, we do not serve customers in that country.”



DIGITAL OCEAN

In 2019, Digital Ocean cut off access for Iranians denying access to its cloud services and virtual private services, both of which are essential for developers and circumventing government filters in Iran. It [cited](#) U.S. sanctions in doing so.



GODADDY

[GoDaddy](#) does not issue secure certificates of any type to Iranian individuals or businesses [due](#) to sanctions, which [inhibits](#) their ability to establish websites.



OTHER LOSS OF ACCESS ISSUES

Many other platforms have denied access to Iranians or even Iranians abroad due to sanctions. This includes [GoFundMe](#), [Khan Academy](#), [Coursera](#), [GitLab](#), and [Slack](#).

Github: Case Study of the Need for Changing Sanctions Law

Github serves as an example of an important platform that was blocked for Iranians but managed to receive a license after a protracted legal process with OFAC.

Github complied with its perception of U.S. sanctions requirements in 2019 and [reduced](#) access to Iranian users of its code sharing platform, which included vital tools to circumvent government filters in Iran. However, Github invested its own resources in getting a license to offer its product to Iranian users, which was granted in 2021.

The fact that the process took Github two years demonstrates how the legal availability of the license does not mean it is designed to be easily accessible. Many companies, especially smaller firms, will not invest the resources required to attain a license to make their products available to Iranian users.

As Github's Mike Linksvayer [told](#) NIAC, "The main thing tech companies need is more clarity and ... a broader license" so that other companies can provide services to Iran while avoiding the extensive resource commitment Github went through to obtain a license. Linksvayer also emphasized the importance of having the Treasury Department incentivize businesses by approving financial channels to facilitate payments for these technological services and goods by Iranians.



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-Mike Linksvayer
Head of Developer
Policy, Github

Recommendations for Updating General License D-1 and Supporting Internet Communications for Iranians

It is imperative that the people of Iran have access to communications tools and services that are safe and allow them to access information. Current U.S. sanctions policy hamstrings their ability to do so and by extension, weakens Iranian civil society and voices in the country.

General License D-1 was a welcome step for reducing the consequences of sanctions on internet communications when it was first implemented over seven years ago. However, it is out of date with modern communications services and tools and needs to be revisited.

The following are recommendations for steps the U.S. government can take to update General License D-1 and more broadly support internet communications for the people of Iran.

Clarifying and Updating General License D-1

- OFAC must update General License D-1 to address the fear of companies who think they might violate U.S. sanctions by providing personal communications tools and services to Iranians.
- OFAC should consult with internet rights experts and technology companies on the scope of an update to General License D-1.
- An updated General License D-1 must provide guidance that details a comprehensive list of exactly what tools and services are allowed. This should be written in a clear and unambiguous fashion and include specific examples to minimize the risk that companies will over comply with sanctions.

- An updated General License D-1 must explicitly include modern-day technologies, such as cloud and hosting services, that are now vital to safe online communications.

Provide Public Assurances and Comfort Letters to Encourage Companies

- Beyond updating General License D-1, the Treasury Department should provide public assurances and comfort letters to major tech companies interested in providing their communications tools and services to the people of Iran.
- OFAC should consult with these companies and ask them what they need to go back into the Iranian market, and directly encourage them to apply for an expedited license if necessary.

Make the OFAC License Application Process Straightforward, Fast, and Cheap

- Obtaining a license to operate in Iran is often time consuming, expensive, and puts the onus overwhelmingly on private companies. In addition to general licensing, the Biden administration should prioritize fast approval for tech firms seeking a license to provide communications tools to Iranians.

Facilitate Payment Channels

- The Treasury Department should generally license banks and financial institutions to facilitate payments from Iranians for online communications goods and services. This would incentivize these businesses to provide their products to Iranians.

Conclusion

There is no doubt that U.S. sanctions have exacerbated limits on internet freedom in Iran. Sanctions have left Iranians more vulnerable to government surveillance and censorship.

They have contributed to the government's ability to disconnect Iranians and separate its population from the rest of the world via its "national internet" project. The repercussions of sanctions are contrary to the stated U.S. aim of allowing the people of Iran access to personal communications tools and services.

The Treasury Department must take necessary steps to ensure U.S. sanctions are not blocking Iranians from platforms critical to modern online communications. This involves working closely with technology companies to address their fears over sanctions violations and giving necessary assurances on the permissibility of giving Iranians access. Such efforts are critical for the U.S. government to uphold a commitment to human rights and freedom of expression.



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