

# Ceasefire unlikely to halt cyberattacks by Iran hackers

DAVID KLEPPER

HACKERS backing Tehran say an uncertain ceasefire between Iran and the United States and Israel won't end their retaliatory cyberattacks, a warning that American cybersecurity experts say potential targets in the US and Israel should take seriously. One leading hacking group known as Handala said after the ceasefire announcement that it was temporarily postponing attacks on the US but would continue to target Israel.

It vowed to revive its efforts against America when the time was right - demonstrating again how digital warfare has become ingrained in military conflict.

Already, the two-week ceasefire appears at risk of fraying over significant disagreements between the parties, which each are claiming victory in the war.

A pro-Palestinian, pro-Iranian network that operates independently of Tehran, Handala has claimed credit for disrupting the operations of the US medical manufacturer Stryker and hacking into FBI Director Kash Patel's personal email account, among other cyberattacks. The group is just one of several proxy hacking networks allied with Iran.

"We did not begin this war, but we will be the ones to finish it," Handala wrote on its X account. "And let it be clear: The cyber war did not begin with the military conflict, and it will not end with any military ceasefire."

US authorities warned on Tuesday that hackers supporting Iran had burrowed into internet-connected computers used to automate and control technology in a variety of important industrial sectors.

The computers, known as programmable logic controllers, are used in ports, power plants and water plants - key targets for foreign hackers looking to disrupt everyday life in the US.

In a joint advisory from the FBI, National Security Agency



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and Cybersecurity and Infrastructure Security Agency (CISA), officials urged organisations that use the technology to ensure their security precautions were up-to-date.

CISA did not immediately respond to questions Wednesday about the impact that the ceasefire would have on cybersecurity.

Cybersecurity experts say the warning should be taken seriously by potential targets regardless of the sides announcing a temporary truce.

Markus Mueller, a cybersecurity executive at Nozomi Networks, said he anticipates an increase in cyberattacks on American organisations following the ceasefire, not a decrease.

That's because any lull in hostilities would allow hackers to shift from regional targets directly involved in the conflict to efforts to infiltrate US organisations that participated in the war effort in

some way, a list that includes data centers, tech companies and defense contractors.

He also predicted that some groups based in Iran or Russia may seek to circumvent the truce by launching a significant cyberattack on a US target that is designed to attract the attention of the American public.

"With a ceasefire, we will likely see an expansion of cyber activity both in scale and scope," Mueller said. "These groups will likely try to execute a high-profile attack such as what we saw with Stryker."

So far, the attacks attributed to pro-Iranian hackers have been high in volume but low in impact, designed to boost morale among Iran's supporters while reminding its opponents of continued vulnerabilities despite their military advantages.

Handala claimed responsibility last month for hacking Stryker, a major medical equipment supply company based in Michigan. Handala claimed the hack was in retaliation for strikes that killed Iranian schoolchildren.

The FBI responded by seizing four internet web addresses used by the group to spread its message. Handala then leaked several old photos of Patel after saying it had hacked into the FBI director's personal email account.

Other pro-Iranian hackers have been linked to efforts to install malware on the phones of Israelis, penetrate cameras in Middle Eastern countries to improve Iran's missile targeting, and target data centres and industrial facilities in Israel, Saudi Arabia and Kuwait.

# Iran's toll proposal at Strait of Hormuz violates trade norms

Move may lead to restrictions in key waterways like Taiwan Strait

DAVID MCHUGH/JOHN LEICESTER

TO end the war with the United States and Israel, Iran is demanding the right to collect tolls in the Strait of Hormuz as a precondition for reopening the waterway vital to world oil supplies.

Yet, collecting tolls in the strait would violate a basic and enduring principle of international maritime trade: freedom of peaceful navigation. It's an ancient idea that was codified by the United Nations' Convention on the Law of the Sea, which took effect in 1994.

Opening the strait would save the global economy from supply constraints that have pushed energy and fertiliser prices sharply higher since the war began on February 28.

But agreeing to Iranian toll-collecting would cement the Islamic Republic's control over the strait through which 20 per cent of the world's oil is shipped - and enrich the country against whom the war was launched.

US President Donald Trump has made reopening the strait a priority. But the White House said Wednesday he is opposed to tolls, and analysts say the Gulf's oil producers are, too. Analysts say they have seen no change in traffic through the strait since the ceasefire was announced, despite claims to the contrary from the White House.

Here are things to know about Iran's proposal and the international law with which it collides.

## Iran already began charging vessels passing through strait

After the US and Israel launched the war, Iran immediately exercised leverage by blocking the strait with attacks - and threats of attacks - on ships, making passage too risky.

The disruption caused immediate shortages in some Asian countries highly dependent on the region's energy, sent gasoline prices higher in the US and Europe, and threatened global economic growth.

Iran then began vetting vessels in a murky scheme dubbed the "toll-booth" by shipping analysts. The ships were told to divert from the middle of the strait in Iranian and



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Omani territorial waters and instead detour around Iran's Larak Island.

After delivering detailed information on crew and cargo to intermediaries of Iran's paramilitary Islamic Revolutionary Guards Corps, some vessels were allowed to proceed - and at least two reportedly paid the equivalent of \$2 million in Chinese yuan.

## Sea Treaty guarantees passage to peaceful ships

Iran's 10-point proposal for ending the war includes a provision allowing it and Oman to charge ships passing through the Strait of Hormuz, according to a regional official who spoke on condition of anonymity to discuss negotiations they were directly involved in. The official said Iran would use the money it raised for reconstruction.

But the Law of the Sea Treaty's Article 17 guarantees a right of "innocent passage" for ships that do not threaten the coastal states. So allowing Iran and Oman to start charging for passage through the strait would set a dangerous precedent, experts said.

Freedom of navigation in the world's seas has been a fundamental right for hundreds of years, founded on "the idea that the sea doesn't belong to anyone", Philippe Delebecque, a professor and maritime law expert at Paris' Sorbonne University, said.

"Freedom of navigation has always been recognised, including specifically in straits," he said. The concern is if the Strait of Hormuz could be closed, then why not the Strait of Gibraltar between the Mediterranean and the Atlantic, or the Strait of Malacca off Indonesia?"

He called that scenario "the end of an international society".

## Neither Iran or US ratified Law of the Sea Treaty

While 172 countries have ratified the UN convention, Iran and the United States are among those that have not. "Not having ratified the convention doesn't give (Iran) total freedom of action in the Strait of Hormuz," Julien Raynaud, who heads the French Association of Maritime Law, a trade group, said. "It remains subject to international law and nota-

bly this customary right of passage." An Iranian tollbooth could lead China to conclude that it could restrict movement in the Taiwan Strait, Raynaud said.

Oman and Iran may face diplomatic pushback to adhere to the convention, said Constantinos Yiallourides, a senior research fellow at the British Institute of International and Comparative Law. Free passage "is in the interest of everyone," he said. "We all want to get the best products at the best prices."

## Global economy needs Strait of Hormuz reopened

Some economists say that, from a strictly financial standpoint, the world would barely notice the additional costs from any tolling in the Strait of Hormuz. For example, a \$2 million toll on a large tanker carrying 2 million barrels of oil amounts to \$1-per-barrel increase on that ship's oil. "The burden does not fall on global consumers, but overwhelmingly on the Gulf states that supply the oil that transits the strait," wrote the Bruegel think tank in Brussels.

It said the world economy would instantly benefit from the opening of the strait - returning 20 per cent of the world's oil to the market and sending prices lower.

Plus, by lowering oil prices, it would eliminate a multibillion-dollar geopolitical windfall for Russia, whose oil is suddenly in greater demand despite sanctions.

# Russia's internet crackdown leads to a spring of growing discontent

DASHA LITVINOVA

SEVERAL dozen people lined up outside a presidential administration building on a sunny spring weekend in central Moscow as police stood nearby and watched them closely.

The people were lodging complaints about the government's intensifying crackdown on the internet that has seen regular shutdowns of cellphone internet connections, blocked popular messaging apps and cut access to thousands of other web-sites and digital services.

It was the latest sign of the growing anger and frustration over the restrictions that have disrupted the daily lives of Russians, hurt businesses and drawn criticism even from Kremlin supporters.

Knowing that any unauthorized demonstrations are harshly suppressed, activists have tried to organize authorized rallies, plastered posters on walls and notice boards, and filed lawsuits. Industry leaders pleaded with authorities to repeal the measures.

Even the leader of Armenia delivered a not-so-veiled barb at Russia during a televised meeting with President Vladimir Putin on April 1. Prime Minister Nikol Pashinyan noted that in Armenia, "our social media, for example, is 100% free. There are no restrictions whatsoever." An unsmiling Putin stared at Pashinyan with slightly raised eyebrows.

The clampdown not only serves to control what websites Russians can see, but also has thrown digital life into disarray, making it difficult to order taxis and deliveries, pay for goods and services electronically, and stay in touch with friends and family.

Politician and Kremlin critic Boris Nadezhdin spoke for many Russians who are upset about the internet clampdown when he said in an interview with The Associated Press: "This infuriates a huge number of people."

Moves toward internet control For years, Russia has sought to take the internet under total government control and potentially cut it off from the rest of the world, blocking tens of thousands of websites, messaging apps and social media platforms that refuse to cooperate with the authorities.

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Internet users have gotten used to circumventing the restrictions by using virtual private networks, or VPNs, even as the government has been actively blocking those, too.

But last year, the restrictions reached a whole new level: sweeping shutdowns of cellphone internet connections -- and sometimes broadband, too -- leaving only a handful of websites and apps on government-approved "white lists."

Officials claimed the drastic measures were needed to thwart Ukrainian drones relying on Russian cellphone internet for navigation as Kyiv tries to strike back during Moscow's 4-year-old full-scale invasion. But the shutdowns hit remote regions that have never been targeted by Ukraine's drones, with ordinary people and businesses decrying the measures as detrimental. The Kremlin has gone after the country's two most popular messaging apps - WhatsApp and Telegram - while simultaneously promoting a state-backed "national" app called MAX, widely seen as a surveillance tool.

At first, voice and video calls on WhatsApp and Telegram were blocked. Then, sending messages became effectively impossible, too, without using a VPN.

Last week, Digital and Communications Minister Maksut Shadayev said his ministry received orders to further decrease the use of VPNs. Unconfirmed media reports said his ministry proposed a flurry of new measures against VPNs. The ministry did not respond to a request for comment sent by AP.

Lawyer Sarkis Darbinyan, co-founder of the RKS Global digital rights group, told AP the goal of the authorities is to drive internet users into a "digital ghetto" of Russian, government-controlled apps and platforms. "The internet is no longer this universal digital good," he said.

Business leaders seek moderation In recent weeks, a growing number of business leaders in Russia have voiced concern about the sweeping restrictions and urged authorities to take a more moderate approach.

Alexander Shokhin, head of the Russian Union of Industrialists and Entrepreneurs, told Putin at a recent forum of the group that cellphone internet shutdowns "made life difficult for both businesses and citizens."

"Given the high level of mobile technology penetration in our lives, we hope that a systemic, balanced solution will be found," said Shokhin, a government minister in the 1990s and a member of the ruling United Russia party since the 2000s. Putin was on stage with Shokhin and spoke immediately after him but didn't address the issue.

A similar plea came from CEOs of two of Russia's four cellphone operators at a telecommunications conference last week. Sergei Anokhin of Beeline and Khachatur Pombukhchan of Megafon said that instead of cellphone internet shutdowns, operators could just identify suspicious users and restrict them, the Russian news agency Interfax reported.

"This would make life significantly easier for people, for clients," Pombukhchan said.

Prominent IT entrepreneur Natalya Kasperskaya lambasted Roskomnadzor, blaming its intensifying efforts to block VPNs for a brief outage last weekend of banking and other services.

"There's no technical way to block VPNs without disrupting the entire internet," she wrote in a post on Telegram. "So, comrades, take screenshots of interesting websites, withdraw as much cash as possible, and get ready to listen to radio reports about foreign enemies who have blocked our once-beloved RuNet," - referring to the Russian internet.

Roskomnadzor denied involvement, and Kasperskaya later apologized in a separate post, but she called for dialogue between the authorities and the IT sector, stressing that "technical decisions sometimes cause downright shock and a desire to at least get an explanation."

Cautious steps toward protest Activists from Moscow to Vladivostok in the Far East have tried to organize rallies against internet restrictions since late February. Knowing that unauthorized demonstrations are harshly suppressed and government critics are routinely jailed, they acted cautiously and sought authorization for the gatherings in accordance with strict protest laws. In most cases, those were rejected, and some activists were even arrested on various charges.

But people managed to hold small pickets in a few cities. In others, activists plastered flyers and banners on walls and public notice boards decrying the restrictions. Opposition politician Nadezhdin, his supporters and other activist groups have filed for permission to hold rallies in dozens of cities on April 12, when Russia marks Cosmonautics Day, honoring the 1961 flight of Yuri Gagarin, the first human in space.

"We're filing for authorization (and saying) we're marking Cosmonautics Day," Nadezhdin says with a subtle smile. "Our slogans will be (about the fact that) cosmonautics is impossible without science, technology and progress, and progress, science and technology development is impossible without connectivity, without communication, without the internet."

# Finland's plan to bury nuclear waste carries risk to future generations

JAMES BROOKS/  
STEPHANIE LIECHTENSTEIN

OLKILUOTO (Finland), Apr 9 (AP) With the push of a button, the elevator descends hundreds of meters in seconds into the dark depths of Onkalo.

"We are now at about minus 430 meters (1,411 feet)," muttered geologist Tuomas Pere as he steered a car through a labyrinth of man-made tunnels. "We are driving through 1.9-billion year old bedrock."

After decades of construction, the world's first facility for permanently disposing spent nuclear fuel is set to begin operations in Finland, becoming a final resting place for tons of dangerous radioactive waste.

Construction of Onkalo - which means "cave" in Finnish - began on the west coast in 2004. It sits on the secluded is-land of Olkiluoto, in a dense wooded area. The closest town is Eurajoki, about 15 kilometers (9.3 miles) inland, which is home to about 9,000 people. Many work at the nuclear power plant or storage facility.

The 1 billion euro (\$1.2 billion) project could soon become operational, with authorities expected to grant a license with-in months.

The Associated Press took a tour of the facilities where humans soon will not be allowed to tread.

**Isolated from civilization'** Pere said the site - near three of Finland's five nuclear reactors - was chosen for its migmatite-gneiss bedrock, which is known for its high stability and low risk of earthquakes.

"It's the isolation from civilization and mankind on the surface that's important," he said, standing in a darkened disposal tunnel, soon to be sealed from humanity. "We can dispose of the waste



more safely than by storing it in facilities located on the ground."

Using unmanned machinery at a nearby encapsulation plant, radioactive rods will be sealed in copper canisters and then buried deep in tunnels over 400 meters underground, then packed in with "buffer" layers of water-absorbing bentonite clay.

Posiva, the company responsible for the long-term management of Finland's spent nuclear fuels, says Onkalo can store 6,500 tons of spent nuclear fuel.

The final disposal canisters are designed to remain sealed "long enough for the radioactivity of spent fuel to decrease to a level not harmful to the environment," it said.

"The solution that we have, it's the missing point for sustainable use of nuclear energy," said Posiva communications manager Pasi Tuohimaa.

Finland's nuclear power companies are paying for the project, he said, adding that they have saved money for decades for that purpose.

Posiva estimate it will take hundreds of thousands of years before the radioactivity falls to normal, background levels.

According to a 2022 report by the International Atomic Energy Agency, almost 400,000 tons of spent fuel have been produced globally since the 1950s, with two-thirds remaining in temporary storage and one third being recycled in a complex process.

fuel is currently temporarily stored inside spent nuclear fuel pools at individual reactors and at dry cask storage sites above ground.

There is currently no permanent underground disposal facility for commercial nuclear waste operational anywhere in the world. Sweden began building a repository in Forsmark - about 150 kilometers north of Stockholm - last year, but it's not expected to open until the late 2030s. France's Cigéo project is yet to begin construction and has seen opposition.

The Onkalo facility is expected to operate until the 2120s, when it will be permanently sealed.

**There are uncertainties'** But Edwin Lyman, director of nuclear power safety at the Union of Concerned Scientists, an American non-profit organization, warned that geologic disposal of nuclear waste is still fraught with "uncertainties."

"My view of nuclear waste disposal is that there's no good option, but it's important to find the least bad option, and geologic disposal in general is going to be the least bad option among a range of, you know, bad options," he said. Lyman said that the copper canisters that contain the spent nuclear fuel will eventually corrode, adding that there are different scientific opinions about how fast that could happen.

"The hope is that such a slow process that most of the radioactive material will have decayed away by then. But again, there are uncertainties," he said.