THREAT INTELLIGENCE

North Korea's Kimsuky Evolves into Full-Fledged, Prolific APT43

In cyberattacks against the US, South Korea, and Japan, the group (aka APT43 or Thallium) is using advanced social engineering and cryptomining tactics that set it apart from other threat actors.

Elizabeth Montalbano, Contributing Writer
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Cybercriminal group Kimsuky has evolved into a full-fledged, persistent threat, carrying out "unusually aggressive" social-engineering attacks aimed at gathering intelligence, and stealing and laundering cryptocurrency to support the North Korean government.

Researchers from Mandiant have tracked a number of changes to the activity of the group, which they call APT43, in a series of rapid-fire attacks against targets in the US, South Korea, and Japan, they revealed in a report published today.

Kimsuky, also tracked as Thallium, has been on various researchers' radar screens since 2018, and its previous activity has been widely reported. In earlier attacks, the group mainly focused on conducting cyber espionage against research institutions, geo-political think tanks, and — particularly during the height of the pandemic — pharmaceutical companies.

The group typically used spear-phishing campaigns to lure in users and then installed various public and non-public malware, including spyware, onto targeted devices, which were often Android-based smartphones. In fact, Kimsuky was identified as recently as earlier this month leveraging malicious Chrome browser extensions and Android app-store services to target individuals conducting research on the inter-Korean conflict.

Now, however, Mandiant researchers have found that APT43 is evolving in several ways.

New Financial & Social Tactics

For one, the group is now following in the shoes of other North Korean APTs and branching out beyond mere cyber espionage to steal cryptocurrency, the researchers have found. In addition to using the ill-gotten currency to fund the regime of Kim Jong-un, as other groups do, APT43 also uses it to bolster its own activities, they said.

The group is even going the extra step of laundering the crypto through legitimate cloud-mining services so it comes out as clean currency and is difficult to track — an activity that might be used by other groups, but has flown under the radar until now, the researchers said.

"The washing of funds and the 'how' has been the missing piece of the equation," notes Michael Barnhart, Mandiant principal analyst at Google Cloud. "We have indications that APT43 utilizes specific hash rental services to launder these funds by mining for different cryptocurrencies."

For a small fee, these services provide hash power, which APT43 uses to mine cryptocurrency to a wallet selected by the buyer without any blockchain-based association to the buyer's original payments. This allows the APT to use stolen funds to mine for a different cryptocurrency, the researchers said. By spending very little, threat actors walk away with untracked, clean currency to do as they wish, Barnhart explains.

Moreover, APT43 — while technologically unsophisticated — relies on advanced and persistent social-engineering tactics in which threat actors create convincing fake personas and exhibit patience in building relationships with targets over several weeks without using malware, the researchers said.

"I've never seen an APT quite as successful with such novel techniques," Barnhart notes. "They pretend to be subject-matter experts or reporters and ask targeted questions — often with the promise of quoting the victim in a report or news article — and successfully gain feedback."

Indeed, in some instances, attackers successfully convinced targeted victims to send over proprietary, geopolitical analysis and research without deploying malware at all, the researchers said.

This deviates from standard procedure for most threat groups, allowing APT43 to expend little effort or resources in building malware and gaining the information they are seeking in a low-fi way — by merely asking victims for it, Barnhart notes.

High Volume Cyberattacks, Shifting Targets

APT43 has shifted its targets, and the malware it uses, in campaigns over the years in response to the demands of the North Korean government and the cyberespionage activities it requires of the group, according to Mandiant.

"APT43 ultimately modifies its targeting and tactics, techniques, and procedures (TTPs) to suit its sponsors, including carrying out financially-motivated cybercrime as needed to support the regime," the researchers said in the report.

For example, prior to October 2020, the group primarily targeted US and South Korean government offices, diplomatic organizations, and think tank-related entities with a stake in foreign policy and security issues affecting the Korean peninsula. Over the next year, however, the group shifted its focus to COVID-19 response efforts in North Korea by targeting health-related verticals and pharmaceutical companies in South Korea, the US, Europe, and Japan.

One notable difference that has emerged between the group and other North Korean threat actors is a recent shift to expand, targeting "everyday users" based on "the sheer velocity and volume of attacks," says Joe Dobson, Mandiant principal analyst.

"By spreading their attack out across hundreds, if not thousands, of victims, their activity becomes less noticeable and harder to track than hitting one large target," he says. "Their pace of execution, combined with their success rate, is alarming."

APT43 is aiming its high-volume activity at entities and organizations in government, business services, and manufacturing as well as think tanks and organizations in education and research related to geopolitical and nuclear policy in the US, South Korea, and Japan, the researchers said.

Given its advanced social-engineering tactics and tendency to go after both specific individuals and wider-net targets, researchers advised organizations that may be at risk to share with their employees "a greater understanding of cyber hygiene and heightened awareness," Barnhart says. "It's important to make personnel aware of this threat actor's TTPs," Barnhart says.

He adds that the APT's spoofed emails are highly convincing, which makes them difficult to spot, even for savvy users; thus, organizations at risk should be on high alert.

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Elizabeth Montalbano is a freelance writer, journalist, and therapeutic writing mentor with more than 25 years of professional experience. Her areas of expertise include technology, business, and culture. Elizabeth previously lived and worked as a full-time journalist in Phoenix, San Francisco, and New York City; she currently resides in a village on the southwest coast of Portugal. In her free time, she enjoys surfing, hiking with her dogs, traveling,...

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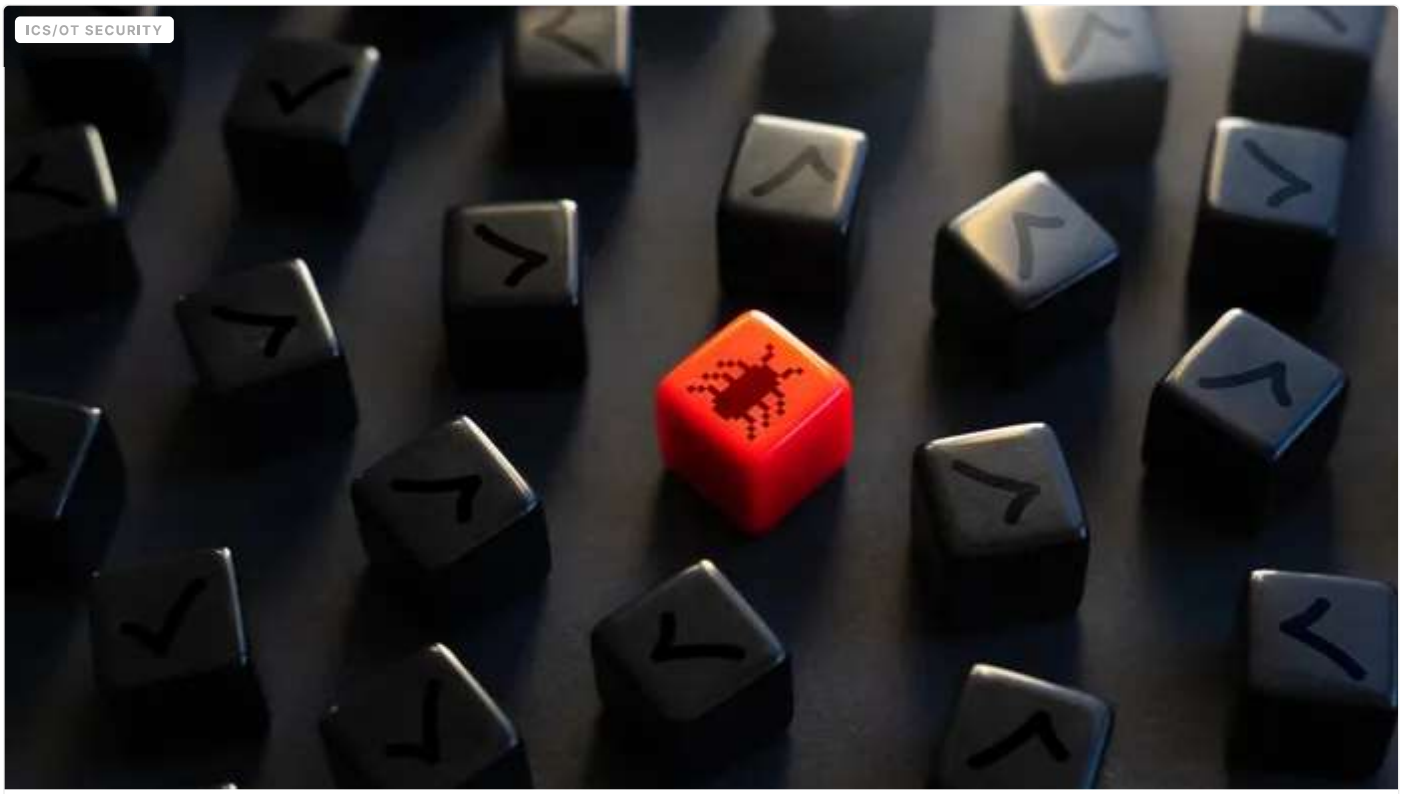

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