

Anatomy of a Cryptojacking

How criminals are using hijacked computers to earn cryptocurrency

BY CHRIS KORNELIS

MANY CYBERCRIMINALS are beginning to move on from ransomware attacks in favor of something called cryptojacking—taking over the processing power of hijacked computers and using it to earn cryptocurrency.

According to a McAfee Inc. report released in June, cryptojacking is becoming a favorite among cybercriminals because it's "simpler, more straightforward and less risky" than ransomware or stealing data.

Hijackers use a network of hacked computers to earn bitcoin or other cryptocurrencies. These currencies use large ad hoc networks of computers to process transactions. In exchange, they award computers on those net-

works newly minted digital currency, a procedure called mining. But to earn that award, a network has to be the first among many working on processing the same transactions to solve a complex math problem.

Mining requires huge amounts of computing power and energy. Cryptojackers avoid the cost of running powerful server farms by tapping the processing power of the systems they hack—including personal computers, game consoles and corporate servers.

Here, Donald Patterson, a professor of computer science at Westmont College in Santa Barbara, Calif., breaks down how cryptojacking works.

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Netting a Profit | Cryptojacking step by step

STEP 1

Break In, Steal Processing Power

Cybercriminals entice users to download malware that contains specialized crypto-mining software. The software runs in the background, tapping idle processing power to run the problem-solving algorithm. Hackers can also use compromised websites to tap into visitors' computers.

STEP 2

Connect Devices in a Network

The malware is then used to connect the machine to a network of hijacked computers. A single PC might never solve the math problem; pooled together in massive numbers, they can match the processing power of specialized crypto-mining computers.

STEP 4

Do the Work and Get Paid

A new block of bitcoin transactions is processed about every 10 minutes. If the cryptojacker is the first to solve the problem, he gets paid for processing the transaction. Payment for a single job is 12.5 coins. Bitcoin is trading at about \$6,400—an \$80,000 payout. Cryptojackers typically pool their resources into a large network that splits these proceeds, plus much smaller transaction fees.

STEP 3

Use the Processing Power for Mining

The network of cryptojacked computers is put to work solving the mathematical code. This can be difficult to detect; slow computer performance or a constantly running fan can be signs that a machine is in the hands of a cryptojacker.

