

Is Cryptojacking A Major Issue?

Nandhakrishnan.B, B.Com LLB (HONS) 4th Year, The Tamilnadu Dr. Ambedkar
Law University, Chennai, India,

Abstract:-

In past years the term crypto currency which is also called as digital currency have come a long way that they are also an alternative form of payment . They uses encryption technologies for the transactions and for that transactions mining is necessary . As the crypto currencies have evolved a lot with that many problems also evolved. Over the years computing powers,internet speeds have increased over the years crypto jacking incidents have also increased. There are many reports for the past few years regarding cryptojacking. This study aims to explain how cryptojacking works,the ways to prevent it and to also be an answer to the question “Is cryptojacking a major threat?”. It is a cyber attack in which hackers use other people's computers and computing powers to mine for themselves. It is using other people's resources.

Key Words: Mining, Cryptocurrency ,System Resources, Cyber attack

Introduction:-

Crypto Jacking is a form of cyber attack. Before getting into Crypto Jacking we have to understand what is mining. Crypto currency mining is necessary to validate the bitcoin transactions¹. There will be a separate network for validating bitcoin transactions digitally and they will be added to the blockchain ledger. Basically it will be done by solving hard puzzles,mathematical equations to verify the transaction. For that, high powered computers are required to mine the crypto currency transactions as it requires a high computing power to solve the mathematical equation.

Mining:-

As said above for mining bitcoin devices with high powered computing powers are required. It requires a huge investment,space and electricity. Mining crypto currencies requires a high powered GPU or application specific integrated circuit. Mining requires the system to be connected with the internet all the time and that internet must be fast and reliable. There is a pool called online crypto mining pool and each miner has to be a member in that for mining.Mining can be also done in our normal personal computers even though high power computers are required we can still use our own personal computers CPU and GPU powers to mine but getting reward for this is questionable.

¹ To generate new coins and verify new transactions.

Rewards will be provided to the miners for mining. The reward has been changed over the years when mining introduced the reward for mining one block is 50 BTC. In 2012 it was changed to 25 BTC .By 2012 it was reduced to 12.5 BTC. On May 11 2020 the reward was reduced to 6.25 BT.

Crypto Jacking:-

As said above it is a cyber attack in which hackers use other people's computers and computing powers to mine for themselves. It is using other people's resources for mining without their knowledge. This can be possible by injecting malware into the system or through a random pop up website or using any other software.

The main question arises here is will this attack on computers affect them? Obviously yes. But most of these malware won't steal the user data or corrupt the existing files like other malware's .Since mining uses GPU power and GPU consumes lots of resources and battery it may affect the battery life and uses lots of electricity, it slows down the system so the user may receive problems like doing other tasks in their system. This is because the persons computers processing power is used for mining crypto mining is like playing heavy games or rendering a high resolution video it will increase the temperature of the system which may affect or short span the overall life of the system.

Laws Regarding Crypto jacking:-

First, is mining legal in India? Yes, there is no need to get permission from any of the members or from the government. If a person is interested in mining he should have good powerful hardware support(application specific integrated chips), electricity, cooling mechanisms and a high speed reliable internet which is necessary 24/7. The income from mining is a taxable income so the users have to pay taxes for the reward they earn from mining under the Income Tax Act 1961.

Coming to crypto jacking, it is a punishable offense. It is a crime under the Indian Penal Code there is no a separate law regarding crypto jacking . In India it is dealt under the Information Technology Act. It is punishable under section 43(d) of IT Act². Section 43(d) says regarding causing damage to computer, computer system, network or data it is punishable under Indian Penal Code the term which include Imprisonment of up to three years or a fine of amount of Rupees Five lakh or above.

² Damages or causes to be damaged any computer, computer system.

Origin Of Cryptojacking:-

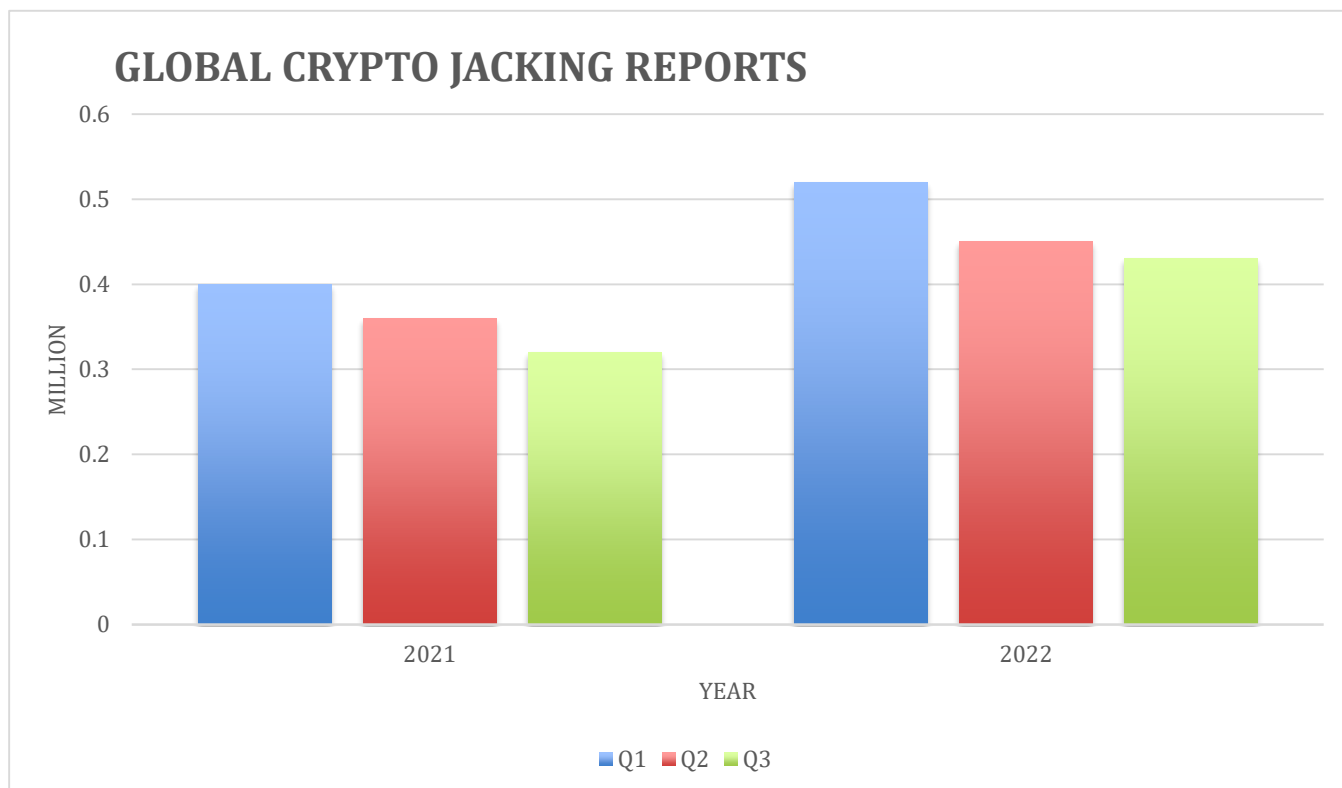
Cryptojacking was first reported in the year 2017. In September 2017 a website called coinhive published a code. The code is used by crypto miners to mine crypto currency by letting the processing power of CPU. Here a website called pirate bay used this code on their website and invited their users to use this method that they can generate funds on viewing on their site. After this many websites like this used the same technique to get access to the capability of computers and other devices.

Latest Reports:-

- The Tesla company has many consoles and these controls are not protected by any security or passwords; they use these consoles for administration purposes. Since there is no protection they injected the malware and their main aim was to not to steal any information about the Tesla their main aim is crypto jacking. Currently many crypto jacking problems are coming via chrome extensions.³
- A customer of Starbucks have reported an incident that the store has an WiFi inside and while using that WiFi the mining has been done using the device which has been connected to the WiFi.
- Currently chrome extensions are becoming a threat as the hackers use some chrome extensions to perform their actions.
- A American cyber security company have given an report that the total crypto jacking have been increases by more than sixty million dollars or thirty percent in the 2022 first half.⁴
- Crypto jacking attacks have increased rapidly on financial companies
- In 2018 the coin hive miner has been found that it is running in youtube ads

³ Medium.com

⁴ Cointelgraph.com



How to Detect Cryptojacking:-

Your system maybe attacked by the mining malware if

- The device struggles to do its actual job or gaming or any other tasks done by it like video rendering which is normally used to being done by it
- When the device experiences a sudden fall in battery life than its usual way of draining.
- When the device response is slower than usual or the UI is sluggish or it experiences any overheating problems due to the high power usage of the processor or GPU.

Ways to Get rid or prevent from crypto jacking:-

- Installing any unwanted software or adding any unwanted third party chrome extensions must be avoided.
- Downloading software's and operating systems from any illegal websites must be avoided.
- Access to hardware must be protected securely.
- Installing antivirus or using windows defender and scanning the device can help in finding and removing crypto jacking malware's and other malware's too.
- Updating all software's and operating systems of the device up to date helps in increase in security and can run more efficiently.

Is Crypto Jacking a major threat?

Coming to the question, is cryptojacking a major threat. It depends on the user or the person or who you are. If you are a normal user with a personal PC or device it is not a such a big threat. Logically for example if someone is buying a gaming laptop the person is buying it for playing games and he will have a basic technical knowledge about his PC on what processor or what GPU is used if there is sudden change in speed or over battery drain or over heating the user will obviously look into it. It's not that easy as of now to inject malware to a person's pc and to start mining.

For crypto Jacking there are some following conditions must be fulfilled to do so:-

- The device should have good hardware support.
- And that device should be connected to the internet all the time and that internet must be reliable and fast.
- The malware or software must be installed in the device and that can be only be installed while accessing any suspicious websites or any extensions.
- Finally the person who is using that device must have no idea of what is going on with his device and he has no technical storage about the device.

Cryptojacking can be only done if all these conditions are fulfilled. But for an individual who buys a device with such technical support will have some knowledge if something wrong is going on with his device so he will try to get rid of it. At the same time as of now especially in India most of them is having limited data internet connection and that limited data is not enough as mining illegally wont work as good as mining legally. But now due to enroll of 5g and people are switching to fiber internet connection the internet speed is increasing and data limit is increasing and crypto currencies users are increasing crypto jacking issues may increase in coming years but as of now it is not a such a big threat to normal general public users.

Coming to the companies they have to make sure that they are not attacked by any malware as they have a active internet connection and good hardware it must be protected securely as these are generally large investments and cryptojacking can be done easily and more mining can be done as there are many powerful devices like Tesla as referred above .

Conclusion:-

However crypto jacking is nothing but stealing other persons devices performances and electricity it is not such a harmful crime. But it is unethical to use a person's device for mining without his knowledge and earning money from it. To reduce these issues proper security is necessary and proper awareness to the people is necessary.