

Hacking as a Cyber Crime, Reviewed from the Perspective of Quran Surah An-Nur Verse 27

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ABSTRACT

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Sciences and technologies adorably develop fast. One of the technology products currently provides huge advantages is the Internet. Aside from the positive impacts resulted from the Internet, there are negative impacts of the Internet among which are high crimes resulted from the use of media on the Internet. One of the crimes resulted from the use of media on the Internet is hacking. Hacking is the activity conducted by infiltrating any other people's networking system and application without permission, which leads to a lot of losses, both materially and non-materially. This research was performed with the following problem formula: 1) the number of cybercrimes and hacking, and 2) How is Islam able to provide solutions to the hacking issue? By using the library research method, studying 2 (two) Quran interpretation books, and learning 5 (five) scientific journals and Islamic books, 2 (two) online data as well as performing direct observation on the public, this research has valid data and is able to disclose that Islam is a solution to prevent the occurrence of hacking as a cybercrime, namely among other through securing assets, privacy, and property; upholding courtesy and etiquette as mentioned in Quran Surah An-Nur verse 27; and applying cyber religion that consists of self-control and self-monitoring.

Keywords: *The Internet, hacking, cybercrime, Quran Surah An-Nur verse 27*

I. INTRODUCTION

Computer technology develops very fast. Presently, almost all over the world gets in touch with the results of this technology engineering. Human lifestyles also change, following the current condition. As a result of human's mind and power products, technology

changes inanimate objects to become objects that give additional value and advantages to human civilization. In the field of information, technology eliminates distance and partition between countries, which leads to dependency between countries and makes country boundaries become blur[1]. Frequent information exchanges in virtual spaces result in

open spaces and the potential for new dangers. These potential dangers are then known as cybercrimes.

1.1 Cybercrime

One of the most important matters in cyber world is trustworthiness, also known as amanah in Islam. Trustworthiness is one of the noble behaviours exemplified by Prophet Muhammad SAW. Thus, at that time, the Prophet companions really believed the Prophet. Such noble behaviour was then exemplified by the Prophet companions, tabi'in, and tabiit tabi'in as well as ulama' and all the Muslims. The condition abovementioned is really different from the current condition when most people utilize and use Internet technology in daily life, and store their data and property in huge amounts in a computer system, specifically in a database, which contains high-security risks. Any data or wealth stored in a database can become insecure when someone, who has Internet capability but is not trustworthy in managing his capability, enters other people's property and then modifies, damages, or takes it without any notification or consent.

A research result issued by the Global Initiative Against Transnational Organized Crime, in May 2017, discloses that there was a ransomware attack, known as WannaCry, which led to a loss of USD 8 billion. In the next month, namely June 2017, there was a bigger attack named NotPetYa, which resulted in a loss of USD 10 billion. Moreover, on 10 March 2020, the Health District in the US state of Illinois was attacked by ransomware, which caused its website containing the Covid-19 manual became down [2]. Cyber attacks occurred during the pandemic all over the world, including in Indonesia.

Cybercrime attacks the target and spread to all countries. Not only aimed at the state, but these attacks also targeted business lines. Every hacker action that manages to take control of computer systems and networks, will usually ask for a large amount of ransom if we want to get back our computer systems and networks.



Figure 1. Cyber attacks all over the world

A large number of Indonesians who are connected to the internet is indeed directly proportional to the high crime rate that uses internet technology as a medium. According to CNN Indonesia[3], throughout 2020, there have been several horrendous cyber attacks, namely among others:

- Hacking against the user data of Tokopedia online platform in the forms of names, emails, and passwords. As a result of this hacking, it was recorded that 91 million **Tokopedia** user data was reportedly leaked and circulated on the dark web.
- Hacking against 13 million user data of **Bukalapak**.
- A hacking community recognized as **Shiny Hunters** claimed that it hacked some of the world's e-commerce websites. One of the hacked websites was **Bhineka** website, in which the hacker successfully hacked 1.2 user data.
- An account named *@underthebreach* informed that on 22 May 2020, hacking occurred against the **General Election Commission (KPU)**'s website, which led to leakage of 2.3 million Indonesian data. One matter that became even more worrying is such hack data contains the NIKs, names, addresses, and dates of births of such 2.3 million Indonesians. The data is very likely to be misused for commercial purposes.
- The data of Indonesia's Covid-19 patients was sold on the black website **Raid Forums** by a hacker named **Data Base Shopping**. The data sold, which was uploaded in **MySQL** format, consisted of 230,000 data, which contained the user IDs, names, addresses, ages, genders, and statuses of the patients.

The data mentioned above is only a small part of the iceberg of cybercrime victims who reported and were recorded. In general, there were not many victims of cybercrimes who reported to the police and were recorded. There

is a reluctance from the victim to report. There is also confusion as to how they should report the case. The National Cyber and Crypto Agency released a report, dated 21 April 2020 regarding Cyber Attacks During the Covid 19 Outbreak, January – April 2020 Period, compiled from the monitoring of the BSSN National Cyber Security Operations Center [4], with the peak of cybercriminal attacks, which occurred on 12 March 2020, a total of 3,344,470 cyberattacks.

The high number of hacking activities and cyberattacks around the world, especially in Indonesia, becomes a challenge, considering that the majority of the Indonesian population is Muslim. Indeed, hacker attacks on other people's property can be minimized or even eliminated, by really raising awareness to practice Allah's commands as stated in the Qur'an Surah An-Nur verse 27.

II. METHODOLOGY

The method used in this research is qualitative research, which aims at comprehending social phenomenon without using mathematical instruments and statistical data processing but using a social phenomenon approach from the participant's perspective. Therefore, the data collection will use library research, namely by carefully studying in detail some books, scientific articles, research and study results, and scientific journals. The data analysis technique used is the descriptive analysis technique, in which the author becomes the main instrument, thus he must have a fairly wide knowledge of the research object.

III. RESULTS AND DISCUSSION

3.1 To Put *Qiyas* “Entering Other People’s House without Permission” into Hacking

In discussing hacking from the perspective of Quran Surah An-Nur verse 27, the first step that should be done is: to put *qiyas* into hacking from the phrase contained in the verse “entering other people’s house without permission”.

There are three types of hacking. White hat hack (ethical security hacker), grey hat hacker (usually may demand some money), and black hat hacker (cybercriminal). Based on *qiyas* pillars, black hat hacking elements can be used in the phrase “entering other people’s

house without permission”, as described as follows:

- a. *Al Aslu* (the Principal), means an event that occurred in the era of Prophet Muhammad whose law is stipulated based on the existing *nash*. According to Surah An-Nur verse 27, the event used as the basis is the prohibition of entering other people’s houses without permission. House also means property, including computer networks.
- b. *Al Far’u* (the Branch), means any current event that has no legal ruling due to abstinence of basis used for determining such law. In terms of the discussion context of hacking, the branch means the hacker, who infiltrates into any other person’s computer system and network unauthorizedly, without permission, and without acknowledgment of such person.
- c. *Al Hukmul Ashliy* means *shara’* law determined in principal problems, which will become the basis for new problems. According to Surah An-Nur verse 27, we are prohibited to enter other people’s houses without permission. It is obligatory for Muslims to enter other people’s houses by asking for permission and saying *salaam*. Related to this matter, Islam really maintains people’s property.
- d. *Al ‘illat* means a reason used by original law, thus it can be used as the basis to form a new problem. In terms of hacking, there is a similarity of *illat* with entering other people’s houses without his permission or acknowledgment, namely entering other people’s property illegally, without his permission and acknowledgment.

3.2 Protection Against Private Data and Information Security

Undeniably, in this modern era, convenience in all things has become a necessity. This convenience is supported by connected devices that support human needs in one network. This is what is called the Internet of Things (IoT).

The proliferation of IoT and its use in everyday life makes it easier for people to share information. Smartphones as an example. With complete features, a high-resolution camera, and very large storage media, it is very easy for anyone to take and store images as they wish. Assisted by 4G or 5G technologies and very

smooth wi-fi, photo and video sharing activities can be done very easily.

The negative side that arises is the misuse of information by irresponsible people. Data and information are personal property, if not properly maintained, then data and information can be self-defeating.

Currently, the issue of personal information privacy is an issue that is currently being discussed. For example, when someone becomes a member of an online shopping platform, they must enter a series of personal data, such as name, date of birth, address, and others. Moreover, since the platform did not maintain its security, there was a lot of theft of the personal data of its members. Another example is when registering as a bank customer, a person is asked to enter his name, address, date of birth, telephone, biological mother's name, and others. Due to the carelessness of the bank, the data was sold to credit card agents, insurance companies, and others, which lead to quite inconvenient for the customer.

Information security is a set of processes to protect the confidentiality, integrity, and availability of data from intentional or unintentional misuse. This means that there is a need for both technical and non-technical approaches that are designed to reduce the risk of an increasingly open information system architecture. Examples of systems with open architecture include internet banking, e-commerce, e-learning, and others that allow direct interaction between external users and the system created [3].

In Islam, there is a term named Maqashid Syariah, which means the objective of law determination. According to Imam As Syatibi, Maqashid Syariah contains 5 (five) objectives [4], namely:

1. *Hifdz Diin* to protect the religion.
2. *Hifdz Nafs* to protect souls.
3. *Hifdz Aql* to protect minds/thoughts.
4. *Hifdz Maal* to protect property.
5. *Hifdz Nasl* to protect offspring.

Personal data and information are part of the property that must be protected for security because it has great value to the owner.

Regarding the security aspect, Islam provides many examples of the importance of security. Quran Surah Al Kahf, verses 90 - 98 explains clearly how Prophet Dzulkarnaen AS made a high and thick wall to prevent Gog and Magog from being able to penetrate the defenses of Prophet Dzulkarnaen. The concept

of this firewall is then known in the IT world as a Firewall. In the IT world, this firewall serves as a fence that functions to prevent unauthorized parties from accessing computer systems [5].

Another example of the effort to maintain security is the story of Prophet Solomon and the information sent by the Hudhud bird. Allah immortalized this story in Quran Surah An-Naml verses 21-30. It is said that the Hudhud bird brought news to Prophet Solomon about a country that was rich, had a very magnificent palace, and was led by a woman. But unfortunately, the country worshiped the sun. Prophet Solomon did not just believe the information received from this Hudhud bird. He, Prophet Solomon, said:

قَالَ سَتَنظُرُ أَصَدَقْتَ أَمْ كُنْتَ مِنَ الْكٰذِبِينَ

Prophet Solomon said, "We will see whether you are telling the truth or lying". (Quran Surah An-Naml:27).

From the story of Prophet Solomon, we learn about examples of managing incoming news or information. Prophet Solomon validated the data in order to ensure that the news or information conveyed was not fake news or hoaxes. In the context of information technology, data/information validation is absolutely necessary, considering the number of links or information links sent are not all correct links. It could be, the link or information link sent contains a virus or malicious program that can enter, spy on, retrieve data, or damage the computer system.

Considering that personal data is privacy and a personal asset, Allah teaches humans to continue to guard against theft and illegal retrieval of data from people who are not entitled to it. In Quran Surah Al Jin verse 8, Allah SWT says:

وَأَنَّا لَمَسْنَا السَّمَاءَ فَوَجَدْنَاهَا مُلَبَّتًا حَرَسًا شَدِيدًا وَشُهَبًا

"Earlier we tried to reach heaven for news, only to find it filled with stern guards and shooting stars." (Quran Surah Al Jin:8)

From verse 8 of Surah Al-Jin, it can be taken as a lesson about the importance of efforts to maintain privacy, information, and personal data. Many bad people try to find out confidential and private information. Remember, crime occurs not only because there is an intention of the perpetrator, but also because there is an opportunity. For that reason, beware!

Thus, the owner of computer property should perform some efforts to maintain and protect his property, such as among others:

1. To use antivirus
2. To install firewall and pop-up blocker
3. To delete any unnecessary software
4. To always backup any important data
5. To carry out security setting
6. To make sure that always using secure connections
7. To be aware and careful when opening email attachments
8. To use strong passwords and change them periodically
9. To never give personal information to any person with uncertain purposes.

3.3 Ethics in Cyber World

Prophet Muhammad was sent to perfect human morals, as reflected in the following hadith:

إِنَّمَا بُعِثْتُ لِأَتَمِّمَ صَالِحَ الْأَخْلَاقِ

"Indeed, I (the Messenger of Allah) was sent into the world to perfect morals." (HR Ahmad 2/381).

From the above hadith, it is clear that the presence of Prophet Muhammad was to perfect human morals. Ethics/courtesy is part of the morality that must be perfected and is one of the duties of Prophet Muhammad. Morals, courtesy, and ethics are something that must receive very serious attention in Islam. Thus, in everyday life, in any activity, a Muslim is obliged to consider ethical aspects in making decisions. Whether or not the decision is right or wrong, he must refer to the guidance of the Quran and the Hadiths of Prophet Muhammad.

In Islam, the term "ethic" has very a close meaning with "khuluq". This is confirmed in Quran Surah verse 4:

وَإِنَّكَ لَعَلَىٰ خُلُقٍ عَظِيمٍ

"And you are truly "a man" of outstanding character." (Quran Surah Al Qolam:4)

Ibn Kathir in his commentary stated that the noble characters deemed as the morals of Prophet Muhammad were because he was a person who practiced the Qur'an, practiced His commands, and stayed away from His prohibitions. These were embedded in him as characters and disposition, as well as good morals, imprinted in his actions [6].

Aside from the term "moral", the Quran also uses some other terms to describe kindness, namely among others:

- a. *Khair* (kindness)
- b. *Qist* (equality)
- c. *'Adl* (justice)
- d. *Haq* (truth)
- e. *Ma'ruf* (virtue)
- f. *Taqwa* (piety)

In view of the terms mentioned above, related to the ethics in using computers, anyone, who is involved in the use of information technology, should previously review and ask himself before conducting his actions. Some questions should be taken into account before conducting any actions related to information technology as follows:

- a. Is there any kindness from the use of information technology?
- b. Is there any breach of other people's rights, specifically in terms of privacy, security, and confidential data?
- c. Is there any possibility of having equality in using information among human beings? How about those who do not understand information security, will they remain safe?

Perhaps, there are still many questions related to activities in the use of information technology. All the questions arising earlier provide an indication of maturity in courtesy and ethics. If humans follow courtesy and ethics according to the instructions of the Quran, then no human will be harmed and there will be a safe, calm, and peaceful society.

Undoubtedly, the internet provides freedom of expression, opinion, doing business, preaching, learning, and any other human activities. In Islamic teachings, humans are given the freedom in carrying out their life goals. However, every choice has consequences and responsibilities that must be borne. Allah SWT says:

فَأَلْهَمَهَا فُجُورَهَا وَتَقْوَاهَا
قَدْ أَفْلَحَ مَنْ زَكَّاهَا
وَقَدْ خَابَ مَنْ دَسَّاهَا

"Then with "the knowledge of" right and wrong inspired it! Successful indeed is the one who purifies their soul, and doomed is the one who corrupts it! (Quran Surah Asy Syams verses 8-10).

In Ibn Kathir's opinion, Allah explains to humans the way of wickedness and piety, then Allah gives guidance to humans, according to what Allah has determined. It is fortunate for

those who cleanse their souls of low morals. It is a loss for those who do not follow the instructions, which will lead them to immoral acts and leave obedience to Allah SWT [6].

Several studies related to internet abuse describe that the problem of misuse of information technology, especially internet media, is mostly initiated by individuals. Thus, self-awareness is absolutely necessary to prevent someone from committing a crime or violating norms and ethics. With this awareness, self-control and self-monitoring can be established [7].

3.4 Islam as the Moral Controller

Islam has perfect teachings, which are comprehensive that can manage all the aspects of human life, starting from small matters up to big matters, including managing human morals when using information technology. These are mentioned in many verses of the Quran.

Experts state that controlling the immoral actions of computer users who take religious or divine principles according to the rules mentioned in the holy book is called Cyber Religion. Religion is proven to be able to reduce, and even prevent deviant behaviours within teachings that make its adherents have self-control and self-monitoring. With the ability to control themselves, humans feel that they are always supervised by Allah SWT, carry out their activities based on religious guidance, and have an impact on avoiding a person from deviant, unethical, and immoral acts [7].

In the concept of Cyber Religion, Danuri mentions 5 (five) main components, namely:

1. Every human action is always supervised by Allah SWT. This is what is called *muraqabah*, which is a trait possessed by a Muslim, in which Allah SWT is always watching, seeing, hearing, and knowing everything he does in every moment, every occasion, every breath, and every blink of an eye. [8]. Allah SWT says:

إِنَّ اللَّهَ لَا يَخْفَىٰ عَلَيْهِ شَيْءٌ فِي الْأَرْضِ وَلَا فِي السَّمَاءِ

It is they who are 'truly' guided by their Lord, and it is they who will be successful. (Quran Surah Ali Imran: 5)

2. Evil deeds lead to calamity. There are some people who like to do evil deeds and hurt others, either due to jealousy or

just feeling like a fad. Such a person feels satisfied when he succeeds in hurting or making other people difficult. This kind of behavior will actually lead to disaster. In Quran Surah Al A'raf verse 163, Allah reminds us of how the Children of Israel were tested by Allah SWT in the form of fish not belong to them. The Children of Israel violated Allah's prohibition to not fishing on Saturdays. They were cunning and circumvent Allah's prohibition by making a dam to let the fish enter and get stuck in the dam.

3. The sin and punishment as a result of man's own evil deeds. In Islam, humans must be responsible for anything they did. No matter how small human deeds, whether good or bad, all will get a reward from Allah SWT, as mentioned in His saying:

فَمَنْ يَعْمَلْ مِثْقَالَ ذَرَّةٍ خَيْرًا يَرَهُ
وَمَنْ يَعْمَلْ مِثْقَالَ ذَرَّةٍ شَرًّا يَرَهُ

“So, whoever does an atom's weight of good will see it. And whoever does an atom's weight of evil will see it.” (Quran Surah Al Zalzalah: 7-8).

4. Evil deeds will surely be rewarded in the hereafter. Every Muslim must believe in this because believing in the last day is part of the Pillars of Faith. Later in the hereafter, humans will be placed according to their deeds when they lived in the world. Those who did good deeds, they will be allowed to live in the heavens, whereas those who did evil deeds, they will be placed in hell. Allah SWT says:

ثُمَّ نُوَفِّي كُلُّ نَفْسٍ مَّا كَسَبَتْ وَهُمْ لَا يُظْلَمُونَ

“Be mindful of the Day when you will 'all' be returned to Allah, then every soul will be paid in full for what it has done, and none will be wronged.” (Quran Surah Al Baqarah: 281).

5. Avoiding evil deeds, because the result will not give any peace. Humans in their nature like a lot of wealth, do not even realize that wealth is actually a test. Any lawful wealth shall be judged, any unlawful wealth shall be punished. However, there are still many people who do not realize this. They do not care about where their wealth comes from, whether

or not it is lawful or unlawful. Any wealth obtained in a lawful way will bring happiness and peacefulness. On the other hand, any wealth obtained in an illegal way will bring miserable life in the world and in the hereafter. Allah explains:

يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَأْكُلُوا أَمْوَالَكُمْ بَيْنَكُمْ بِالْبَاطِلِ
إِلَّا أَنْ تَكُونَ تِجَارَةً عَنْ تَرَاضٍ مِنْكُمْ

O believers! Do not devour one another's wealth illegally, but rather trade by mutual consent. And do not kill each other or yourselves. Surely Allah is ever Merciful to you. (Quran Surah: An-Nisa: 29)

In consideration of the five components and some verses of the Quran mentioned above, any person who interacts with information technology can have self-control, self-monitoring, and self-regulation; thus, in using information technology, they can limit and keep themselves from harming and endangering other people.

When a hacker can apply the cyber religion components, it is hoped that he will realize and change his orientation, thus he has the will to optimize his knowledge and expertise for good purposes only. In fact, the knowledge and skills possessed in programming can be optimized and empowered to assist agencies or organizations in seeing security gaps in systems, networks, or applications. Such hackers are called Penetration Test (PenTest) hackers, namely hackers who use their knowledge and expertise for simulating authorized attacks on a system, network, or application in order to find out vulnerabilities and security holes that might occur.

From the explanations mentioned above, we can see that Islam provides solutions to all human problems, without the time and territorial limitations, by using the Quran as guidance.

IV. CONCLUSION

After discussing the previous chapters in detail, the author would like to make some conclusions as follows:

1. Crime is behavior that is contrary to the values and norms legalized by written law. Cybercrime is an unlawful act carried out using technology based on the sophistication of computer and telecommunication technologies. There are

three types of hackers: black hat hackers, white hat hackers, and grey hat hackers. One of the cybercrimes is black hat hackers, the illegal activity of a person who has high knowledge of the ability to enter and infiltrate other people's systems, networks, and applications, without the knowledge of the owners of the networks and applications.

2. Quran Surah An-Nur verse 27 contains the courtesy and ethics of entering other people's homes. This verse gives a message to Muslims to uphold the courtesy of not visiting carelessly. It is necessary to ask permission and say *salaam*. People who run and uphold courtesy and ethics are people who have high civilization. By carrying out the messages contained in Quran Surah An-Nur verse 27, it will be created a harmonious household order, hence a safe, peaceful, fair, and prosperous society can be established.
3. By using *qiyas*, it can be seen that there are similarities between entering someone else's house without permission and accessing someone else's computer, network or application secretly (hacking). For that reason, the same law applies to entering other people's homes and hacking. To protect computer and network properties, it is necessary to have the awareness of computer and application owners to strictly apply security factors. To prevent a hacker from being aware, it is necessary to have self-control and self-monitoring, which can be obtained from the application of cyber religion. With self-control and self-monitoring, a hacker will be aware and use his knowledge and expertise for good deeds only.

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