

# Danger: Hackers can target medical devices, change medical examination and treatment results

Hackers can completely infect malicious code on many medical devices such as computerized tomography (CT), magnetic resonance imaging (MRI) to manipulate and modify medical examination results.

A really shocking new information has been discovered by security experts: Hackers can completely infect malicious code on many medical devices such as computerized tomography (CT), plus cameras Magnetic resonance (MRI) aims to manipulate and modify medical examination results, causing serious consequences for not only hospitals and patients, but also society.



1. Reveal personal data of more than 1.3 million people from a vulnerability in web application

Accordingly, network security experts in Israel have found several security flaws for software that runs on many modern CT and MRI scanners, which can help cyber criminals hack (take ownership) of those. This device, thereby arbitrarily manipulating and editing the results, and can eventually lead to misdiagnosis.

More specifically, a group of experts at the network security laboratory of Ben-Gurion University in Israel, led by two veteran security experts Yisroel Mirsky and Yuval Elovici, discovered that security holes on many software of CT and MRI scanner systems can be exploited by toxic agents to add false cancer diagnosis or even generate information about 'real' tumors in the output. To reach this conclusion, the researchers had to conduct a test on the use of malicious code to create or delete information and images of malignant tumors in a CT sample of a cancer patient. lung. The results show that even the most experienced radiologists believe that the copy of this CT scan is true without any knowledge or suspicion that it has been manipulated and tampered with.

resulting in their misdiagnosis of the patient's physical condition.



#### 1. Hackers antivirus application preinstalled on Xiaomi phones into malware

The above information is stated in the text of IBTimes (International Business Times) report as follows:

*'In tests conducted by Yisroel Mirsky's team, Yuval Elovici came from the cyber security laboratory at Ben-Gurion University in Israel, security experts were able to create and delete images of the Cancer lymph nodes in a copy of a CT scan of a lung cancer patient. However, the most dangerous aspect that has been tested indicates that most of the most experienced radiologists in Israel believe that the copy of the result is 100% true, and of course then they have incorrectly diagnosed the patient's condition. Security experts later revealed to relevant medical experts that a copy of the CT scan was actually falsified, and at the same time continued to give them a copy of the other CT scans. also fake. Surprisingly, there are still about 60% of medical professionals misdiagnosed in this second situation. '*

From the testing of Israeli security experts, it is clear that hackers can fully utilize the vulnerabilities in the software of medical devices to produce fake results, which are specific here. is the image, information about fake or real tumors in the lungs, brain, liver, spine . of cancer patients can be edited as well as easily changed, even the leading medical experts even Unable to detect.



1. Insider attacks are becoming more and more popular and difficult to detect

Besides, according to experts, if these holes are deeply exploited, hackers can control the results related to many other medical conditions such as spinal injury, arthritis, wire injury. Fractures, fractures, heart disease . cause serious consequences in the medical field.

On the other hand, experts also point out that hackers can completely take over device management to change the 3D body scan results in real time using an MITM system (Man-in-the-box). Middle) includes a simple Raspberry Pi 3 series computer with network bridge setup, Wi-Fi access point and long set of separate malware injection software, then put this MITM device near the Unprotected medical equipment. The MITM device will be responsible for blocking and editing data in real time.



1. The alarming increase in the number of attacks targeted at IoT devices

In general, this is a very serious problem, which can lead to 'unimaginable' consequences in many specific situations. 'People with medical expertise can fully take advantage of these vulnerabilities for their personal purposes. In addition, it also makes doctors unable to correctly diagnose the patient's condition, resulting in mistakes during treatment that could endanger the patient's life. "

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