

Case Study: Data Breach in Singapore

Data of some 129,000 Singtel customers, including NRIC details, stolen in hack of third-party system



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SINGAPORE - The personal data of some 129,000 Singtel customers were extracted by hackers during the recent breach of a third-party file sharing system used by the telco.

Information such as names, addresses, phone numbers, identification numbers and dates of birth, in varying combinations, were stolen by attackers, said Singtel in a statement on Wednesday (Feb 17).

They also stole the bank account details of some 28 former Singtel employees, and the credit card details of 45 employees of a corporate customer, according to the statement.

Personal info of 1.5m SingHealth patients, including PM Lee, stolen in Singapore's worst cyber attack



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SINGAPORE - In Singapore's worst cyber attack, hackers have stolen the personal particulars of 1.5 million patients. Of these, 160,000 people, including Prime Minister Lee Hsien Loong and a few ministers, had their outpatient prescriptions stolen as well.

The hackers infiltrated the computers of SingHealth, Singapore's largest group of healthcare institutions with four hospitals, five national speciality centres and eight polyclinics. Two other polyclinics used to be under SingHealth.

At a multi-ministry press conference on Friday (July 20), the authorities said PM Lee's information was "specifically and repeatedly targeted".

Case Study: Target Attack

News

Target credit card data was sent to a server in Russia

The data was quietly moved around on Target's network before it was sent to a US server, then to Russia

By Jeremy Kirk

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IDG News Service - The stolen credit card numbers of millions of Target shoppers took an international trip -- to Russia.

A peek inside the malicious software that infected Target's POS (point-of-sale) terminals is revealing more detail about the methods of the attackers as security researchers investigate one of the most devastating data breaches in history.

Findings from two security companies show the attackers breached Target's network and stayed undetected for more than two weeks.

Over two weeks the malware collected 11GB of data from Target's POS terminals, said Aviv Raff, CTO of the security company [Seculert](#), in an interview via instant message on Thursday. Seculert analyzed a sample of the malware, which is circulating among security researchers.

The data was first quietly moved to another server on Target's network, according to a [writeup](#) on Seculert's blog, It was then transmitted in chunks to a U.S.-based server that the attackers had hijacked. Raff said.

In its Jan. 14 analysis, iSight wrote that the "Trojan.POSRAM" malware collected unencrypted payment card information just after it was swiped at Target and while it sat in a POS terminal's memory. The type of malware it used is known as a RAM scraper.

The code of "Trojan.POSRAM" bears a strong resemblance to "BlackPOS," another type of POS malware, iSight wrote. BlackPOS was being used by cyberattackers [as far back as](#) March 2013.

Although Trojan.POSRAM and BlackPOS are similar, the Target malware contains a new attack method that evades forensic detection and conceals data transfers, making it hard to detect,

Case Study: WannaCry Ransomware



Significance of Computer Security

Critical to national security

- ▶ Cyber espionage: steal classified information from rival government or military systems, such as diplomatic strategies, defense plans, etc.
- ▶ Election interference: spread false information to influence public opinion, hack political campaigns, or manipulate voting systems.
- ▶ Cyber warfare: disrupt the military operations, or Distributed Denial of Service attacks against government services or infrastructure
- ▶ Supply chain attacks: target software or hardware suppliers to compromise the systems in government or defense agencies
- ▶ Cyber terrorism: launch attacks aimed at causing physical destruction or fear, such as targeting dams, chemical plants or hospitals

Case Study: Stuxnet Malware

Stuxnet 'hit' Iran nuclear plans



The Stuxnet worm might be partly responsible for delays in Iran's nuclear programme, says a former UN nuclear inspections official.

Olli Heinonen, deputy director at the UN's nuclear watchdog until August, said the virus might be behind Iran's problems with uranium enrichment.

Discovered in June, Stuxnet is the first worm to target control systems found in industrial plants.

Analysis carried out by security firm Symantec shows that a Stuxnet-infected controller in an industrial plant would make the devices it was connected to run at very high speeds almost indefinitely.

Symantec's research also suggests that Stuxnet was designed to hit motors controlling centrifuges and thus disrupt the creation of uranium fuel pellets.

Figures gathered by security firms show that 60% of all the infections caused by Stuxnet were on machines in Iran.