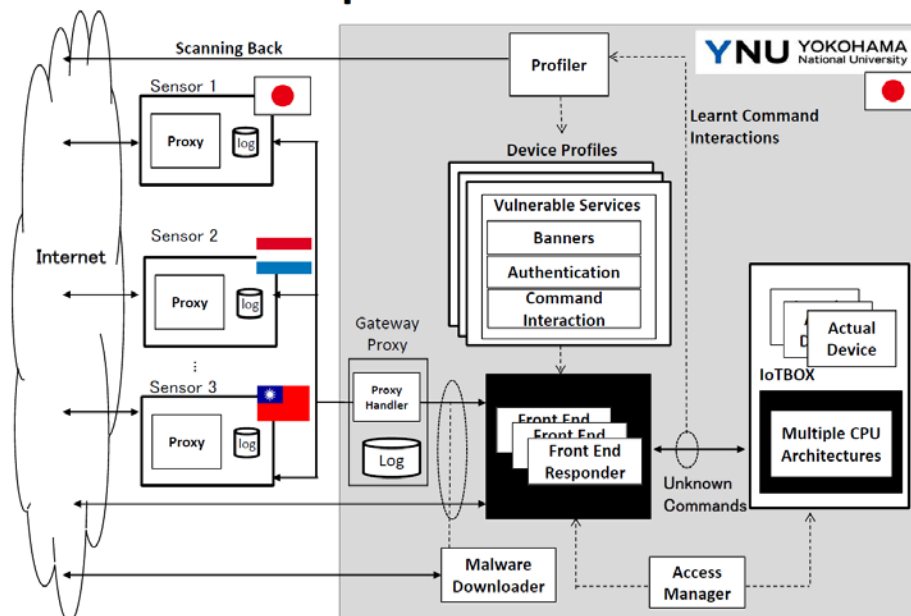


Find out hidden cyber threats!

IoT POT: A novel "honeypot" luring cyber-attacks to IoT Devices

Associate Professor Katsunari Yoshioka and his research group analyzed ongoing attacks against IoT devices including home electric appliances, industrial equipment, medical equipment, cameras, sensors, with their novel honeypot, "IoT POT".

Current Implementation of IoT POT



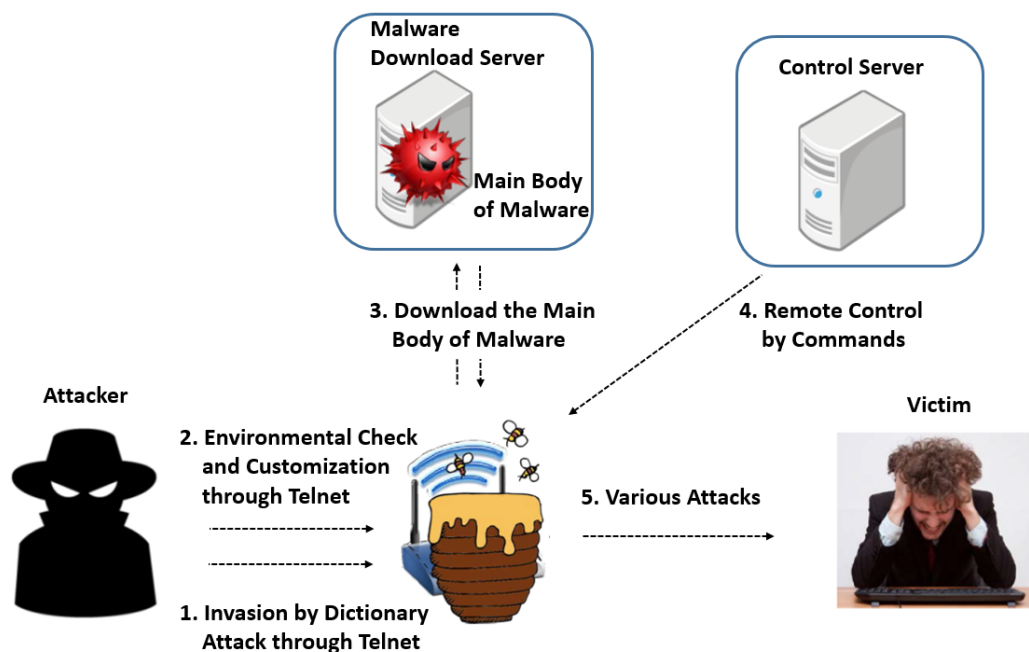
900,000 attacks from 150,000 IoT devices during 4 months.

As the Internet of Things (IoT) progresses, cyber-attacks against IoT devices are increasing rapidly. The research group observed 900,000 attacks from 150,000 IoT devices during 4 months from April to July, 2015 of the "IoT POT" operation. Those attacks could not have been captured by the existing honeypots. They confirmed 361 types of attacking IoT devices including not only home electric appliances but also infrastructure equipment such as parking-lot management system and building management system.

Malware spread through Telnet.

Analyzing the captured malware, they confirmed that the hacked IoT devices made DDoS attacks by accessing certain websites or servers simultaneously and also spread malware through Telnet. It revealed that more than 5 types of these viruses existed and a part of them was often updated and rapidly evolved to infect even more types of devices.

Flow of Malware Infection through Telnet



Risk of terrorist attack to infrastructure through hacked IoT devices.

It is difficult for most of the owners of the hacked devices to realize the damage because a lot of existing cyber-attacks against IoT devices aim DDoS attack. However, there is a risk of serious crimes of hacking the management systems for commercial buildings, airport, and other places where many people gather.

Associate Professor Yoshioka and his research group continues to observe, analyze, and establish the security measures for cyber-attacks.

Related Links:

1. ["IoTPOT: A Novel Honeypot for Revealing Current IoT Threats", Y. M. Pa Pa, S. Suzuki, K. Yoshioka, T. Matsumoto, T. Kasama, C. Rossow, *Journal of Information Processing*, Vol.24 No.3, 522-533, \(May 2016\)](#)
2. [YNU-IAS Research Division "Information and Physical Security"](#)

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