# ATTACKS OF THE LAZARUS CYBERCRIMINAL GROUP ATTENDED TO ORGANIZATIONS IN RUSSIA

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Security investigators have concluded that the North Korean state-sponsored cybercriminal group, Lazarus, would be conducting suspicious activities targeting companies based in Russia. This is based on the connections discovered between the tactics, techniques and tools detected and the mode of operation of the group also known as Hidden Cobra.

## **Affected Services**

Microsoft Windows Operating Systems

## **Technical details**

The Lazarus campaign targeting Russia uses malicious Office documents delivered as ZIP files, along with a PDF document called NDA\_USA.pdf that contains a StarForce Technologies agreement, which is a Russian software company that provides copy protection software.

The security community believes that Lazarus is divided into at least two subdivisions: the first called Andariel, which focuses on attacking the government and organizations of South Korea, and the second, Bluenoroff, whose main focus is monetization and campaigning.

## global espionage

This incident, however, represents an unusual choice of victim by the North Korean threat actor. Typically, these attacks reflect geopolitical tensions between the Democratic People's Republic of Korea (DPRK) and nations such as the United States, Japan and South Korea.

### Infection chain

The main infection flow consists of the following three main steps:

- 1. A ZIP file that contains two documents: a benign decoy PDF document and a malicious Word document with macros.
- 2. The malicious macro downloads a VBS script from a Dropbox URL, followed by the execution of the VBS script.
- 3. The VBS script downloads a CAB file from the server in the download zone, extracts the embedded EXE file (KEYMARBLE) with the Windows "expand.exe" utility and finally executes it.

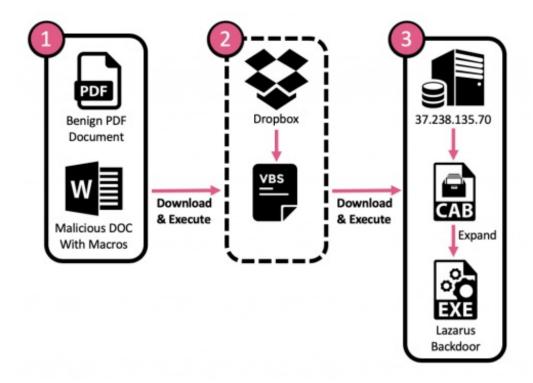


Figure 1: Lazarus KEymarble malware infection sequence.

## **KEYMARBLE**

This malware is a remote administration tool (RAT) that provides its operators with basic functionality to retrieve information from the victim's computer. Once executed, it performs several initializations, contacts a Command and Control (C&C) server and waits indefinitely to receive new commands. Each command received is processed by the backdoor and is handled within an appropriate function, which in turn collects information or performs an action on the target computer.

## **Commitment Indicators (IoC)**

### IΡ

194 [.] 45 [.] 8 [.] 41 37 [.] 238 [.] 135 [.] 70

### Hashes

MD5: dc3fff0873c3e8e853f6c5e01aa94fcf

SHA256: 1c4745c82fdcb9d05e210eff346d7bee2f087357b17bfcf7c2038c854f0dee61

MD5: 704d491c155aad996f16377a35732cb4

**SHA256**: e23900b00ffd67cd8dfa3283d9ced691566df6d63d1d46c95b22569b49011f09

MD5: 2b68360b0d4e26d2b5f7698fe324b87d

SHA256: 49a23160ba2af4fba0186512783482918b07a32b0e809de0336ba723636ae3b6

MD5: a7be38e8f84c5ad9cce30d009dc31d32

SHA256: f4bdf0f967330f9704b01cc962137a70596822b8319d3b35404eafc9c6d2efe7

MD5: 7646d1fa1de852bb99c621f5e9927221

**SHA256**: 9894f6993cae186981ecb034899353a04f1a9b009bdf265cecda9595b725ee20

MD5: 22d53ada23b2625265cdbddc8a599ee0

SHA256: 8e099261929b1b09e9d637e8d054d5909b945b4157f29337977eb7f5fb835e5d



Our clients are recommended to follow the following preventive actions to reduce risks:

# For information security personnel:

- Maintain a strict update protocol for operating systems, antivirus and all applications running on them.
- Constantly raise awareness among users on issues related to computer security.

- Restrict the ability (permissions) of users to install and run unwanted software applications. Do not add users to the local administrators group unless necessary.
- Block the commitment indicators (IOC) shown in the security devices of your infrastructure.
- \*\* Before carrying out the blocking of IOCs, it is important that in the development environment it is previously validated and confirmed at the level of internal and external services, in order to apply the changes in a controlled manner.

### For end users:

- Verify the account information that sends you an email, the name and address of the recipient to identify if they are suspicious.
- Do not open emails of doubtful origin (unknown sender), or click on links, or download unknown attachments.
- If a spam or phishing email is detected, report it immediately to the information security officers of your institution.
- Scan all software downloaded from the Internet before execution.
- Visit secure web pages (https), and verify the digital certificate with a click on the status bar lock.

### Sources

- Source 1: <u>North Korea Turns Against New Targets ?!</u>
- Source 2: <u>North Korean APT Lazarus Targets Russian Entities with KEYMARBLE</u> <u>Backdoor</u>

If you have any questions, do not hesitate to contact us: <a href="mailto:reports@securesoftcorp.com">reports@securesoftcorp.com</a>