A Deep Dive into ThreatNeedle cluster of Lazarus Group

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whoami

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- GReAT Senior Security Researcher
- Threat intelligence analyst, Cyber threat hunter
- Focused on Korean-speaking APT actors

Author of Securelist

- Lazarus covets COVID-19 related intelligence
- MATA: Multi-platform targeted malware framework
- Operation AppleJeus Sequel
- ScarCruft continues to evolve, introduces Bluetooth harvester
- Cryptocurrency businesses still being targeted by Lazarus
- Operation AppleJeus
- OlympicDestroyer is here to trick the industry

Lazarus group

Adversary

Lazarus(a.k.a Hidden Cobra)

Published by Novetta in 2014

Several campaigns/subgroups

Victim

Financial profit

Cyber espionage

Capability

Weaponized document

Manuscrypt/ThreatNeedle

Multi-stage components

Several malware clusters

Infrastructure

Compromised server

Commercial hosting service

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Malware clusters of Lazarus group

ThreatNeedle cluster

MATA(a.k.a Dacls) cluster

AppleJeus cluster

Bookcode cluster

DeathNote(a.k.a DreamJob) cluster

Manuscrypt cluster

Feb 2018

May 2018

June 2018

Jul 2018

Oct 2018

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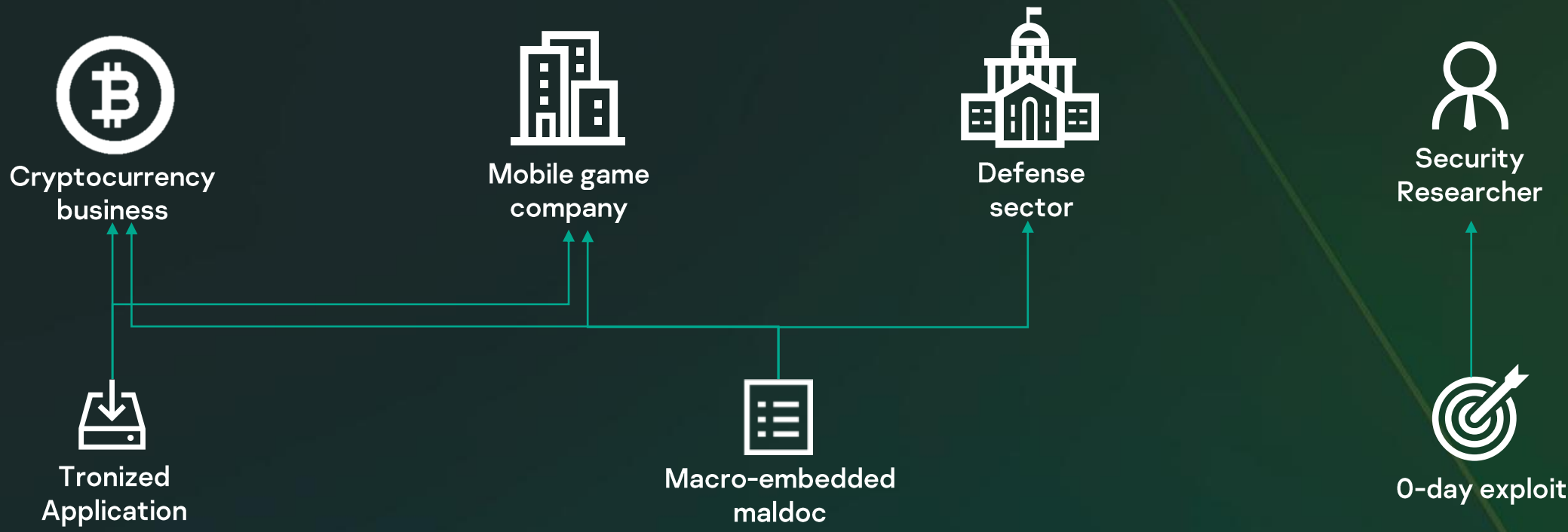
Initial Infection



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ThreatNeedle Malware

Malware components

Installer

- Delivered by infection vector
- Contain payload and config
- Install payload

Downloader

- Fetch payload
- Load directly fetch payload
- Send triage information

Loader

- Various types
- Load next payload after decrypting
- Refelctive loading

Injector

- Decrypt payload
- Inject to legitimate process

Backdoor

- Final payload
- Full-featured backdoor
- Handle keyboard-hands-on activities

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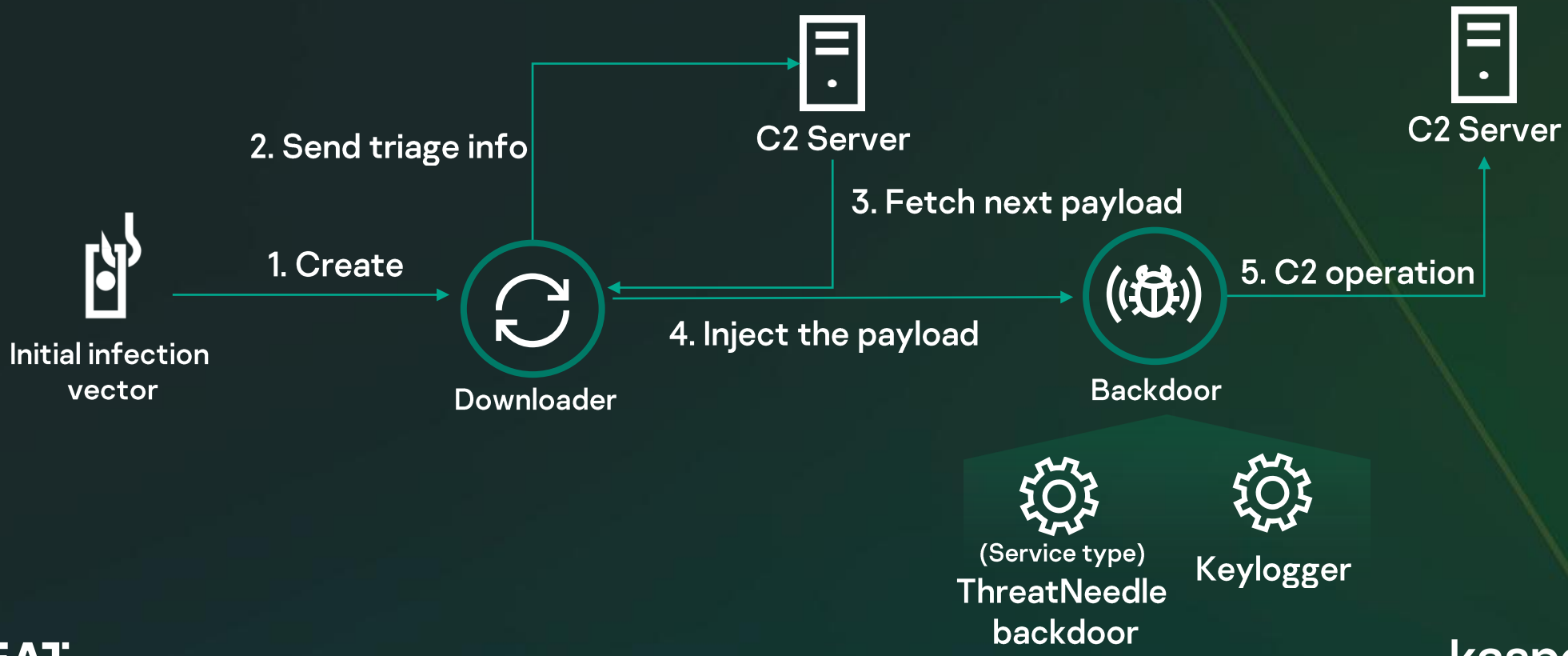
ThreatNeedle Malware

Infection Scheme



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Post-exploitation

- Windows commands
- Custom SMB scanner

Discovery

- Sniffing
- Responder(NBT-NS poisoning)
- Browser storeed credential

Crendential Gathering

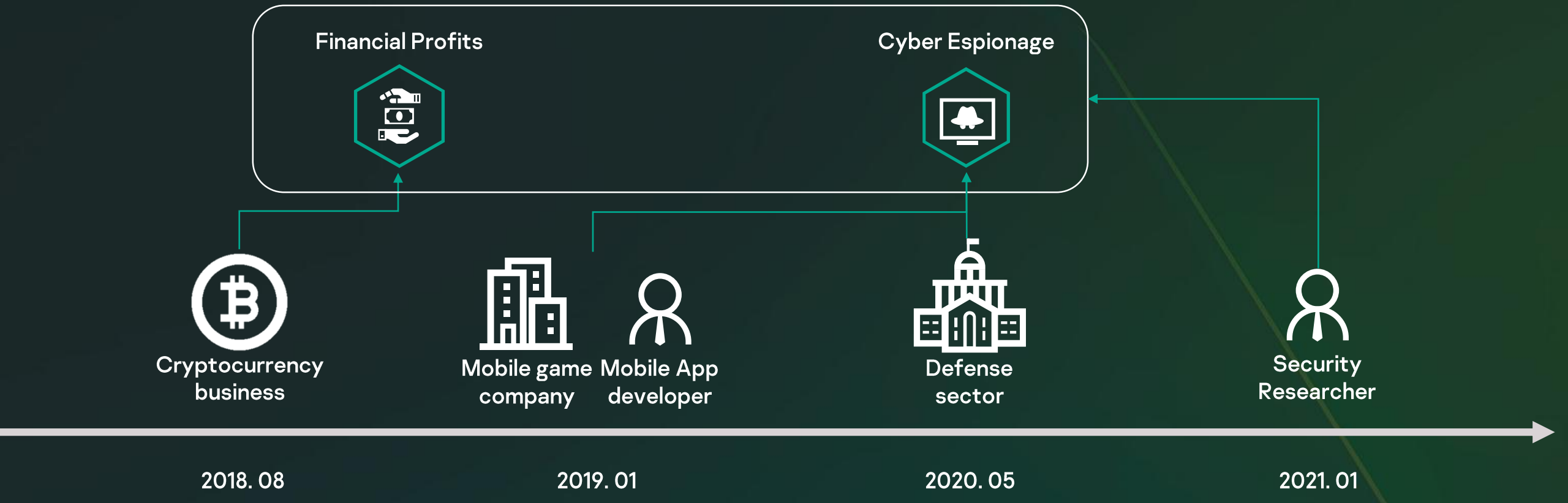
- Windows commands (WMIC)
- Copy ThreatNeedle
- Overcome air-gap network

Lateral Movement

- Tunneling tool
- Exfiltration tool disguised as VNC viewer

Exfiltration

Victimology



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Summary

- ThreatNeedle: Multi-component based multi-stage infection
- Highly sophisticated and rapid keyboard-hands-on activity
- Strong motivation target for various industry, even you can be the victim

Question?


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