

THREAT ADVISORY

Mustang Panda targets European diplomats using enhanced PlugX backdoor

TA2022056

Threat Level

RED

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Mustang Panda, a Chinese cyberespionage group, has been targeting European diplomats with a revised version of the PlugX backdoor in an ongoing campaign linked to the ongoing conflict in Ukraine. The group, also known as RedDelta and TA416, has previously been observed targeting entities associated with the Vatican-Chinese Communist Party diplomatic ties, as well as other critical sectors in Asia, Europe, and the United States.

The group has been observed distributing phishing emails including links to dangerous Zip files housed on Dropbox. If the files are opened, they finally lead to the execution of PlugX on the victim's device. Web bugs are used to profile users before distributing a variety of PlugX malware payloads through malicious URLs. Previously, DLL search order hijacking was used to deploy PlugX, but in newer operations, the threat actor shifted to employing potplayermini.exe to start the hijacking process. In addition, the attackers improved the encoding process of their virus and enhanced its configuration possibilities.

The TTPs commonly used by Mustang Panda are:

- TA0042 - Resource Development
- TA0001 - Initial Access
- TA0002 - Execution
- TA0003 - Persistence
- TA0004 - Privilege Escalation
- TA0005 - Defense Evasion
- TA0006 - Credential Access
- TA0007 - Discovery
- TA0008 - Lateral Movement
- TA0009 - Collection
- TA0011 - Command and Control
- TA0010 - Exfiltration
- T1583.001: Acquire Infrastructure: Domains
- T1071.001: Application Layer Protocol: Web Protocols
- T1560.001: Archive Collected Data: Archive via Utility
- T1560.003: Archive Collected Data: Archive via Custom Method
- T1119: Automated Collection
- T1547.001: Boot or Logon Autostart Execution: Registry Run Keys / Startup Folder
- T1059.001: Command and Scripting Interpreter: PowerShell
- T1059.003: Command and Scripting Interpreter: Windows Command Shell
- T1059.005: Command and Scripting Interpreter: Visual Basic
- T1074.001: Data Staged: Local Data Staging
- T1573.001: Encrypted Channel: Symmetric Cryptography
- T1546.003: Event Triggered Execution: Windows Management Instrumentation Event Subscription
- T1052.001: Exfiltration Over Physical Medium: Exfiltration over USB
- T1203: Exploitation for Client Execution
- T1083: File and Directory Discovery

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- T1564.001: Hide Artifacts: Hidden Files and Directories
- T1574.002: Hijack Execution Flow: DLL Side-Loading
- T1070.004: Indicator Removal on Host: File Deletion
- T1105: Ingress Tool Transfer
- T1036.005: Masquerading: Match Legitimate Name or Location
- T1036.007: Masquerading: Double File Extension
- T1027: Obfuscated Files or Information
- T1027.001: Binary Padding
- T1003.003: OS Credential Dumping: NTDS
- T1566.001: Phishing: Spearphishing Attachment
- T1566.002: Phishing: Spearphishing Link
- T1057: Process Discovery
- T1219: Remote Access Software
- T1091: Replication Through Removable Media
- T1053.005: Scheduled Task/Job: Scheduled Task
- T1218.004: Signed Binary Proxy Execution: InstallUtil
- T1218.005: Signed Binary Proxy Execution: Mshta
- T1518: Software Discovery
- T1082: System Information Discovery
- T1016: System Network Configuration Discovery
- T1049: System Network Connections Discovery
- T1204.001: User Execution: Malicious Link
- T1204.002: User Execution: Malicious File
- T1047: Windows Management Instrumentation

Actor Details

Name	Origin	Target Locations	Target sectors	Motive
Mustang Panda (TA416, RedDelta, BRONZE PRESIDENT)	China	Australia, China, Czech, Ethiopia, Germany, Hong Kong, India, Indonesia, Italy, Myanmar, Slovakia, Spain, Ukraine, USA, UK Vietnam, Singapore, South Korea, Taiwan	Aviation, Government, Law enforcement, Telecommunications, Embassies	Information theft and espionage

Indicators of Compromise (IoCs)

Type	Value
SHA-256	6fd9d745faa77a58ac84a5a1ef360c7fc1e23b32d49ca9c3554a1edc4d761885, 5851043b2c040fb3dce45c23fb9f3e8aefff48e0438dec7141999062d46c592d, effd63168fc7957baf609f7492cd82579459963f80fc6fc4d261fbc68877f5a1, b2ff5535caa1d70c9d0d59cd68619b142858ae018064c891b4671154aa93abf3, 54b491541376bda85ffb02b9bb40b9b5adba644f08b630fc1b47392625e1e60a, a4ff2c5913cce536759777acee3cfcc8824b927304c8a93ac64d37d1b01a576f, a07cece1fa9b3c813c0b6880b24a6494a9db83e138102da3bce30ebff51909c0, 0c2f5b6fe538d088fed11ab10925210cb2eb782f471e6f09c484677e82fc5f26, ec32ff0c049bd8812a35aeaaaae1f66eaf0ce8aefce535d142862ae89435c2e2, 76da9d0046fe76fc28b80c4c1062b17852264348fd873b7dd781f39491f911e0, 19870dd4d8c6453d5bb6f3b2becb8b28c6f280b6a7ebf5e0785ec386170000, e1dbe58393268d7ddabd4bed0cddedf0fbbba85d4c3ef1300580ed4c74e147aa61,

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Type	Value
SHA-256	436d5bf9eba974a6e97f6f5159456c642e53213d7e4f8c75db5275b66fedd886, a01f353c92afcd45b5731815c79f1e1d01366cefa75b41550a28d999857c5b88, 472822c6bdc710175987eb7d9171f780c974a83ea2b26f117b748babb9b796b8, fac8de00f031299f6c698b34534d6523428b544aad6a40fdc4b000a04ee82e7c, 82df9817d0a8dca7491b0688397299943d9279e848cdc4a5446d3159d8d71e6f, b9e330373b382beaf4f0bcce83d65f13399d42dc3e9fcdc7b4ef26fa89360762, 03a836034360841fd6b99927c5b639d074e9fce4f16bd4f77ab57a9e5c12d976
IPs	103.107.104[.]19, 69.90.184[.]125, 45.154.14[.]235
URLs	<p> hxxps://45.154.14[.]235/State_aid__Commission_approves_2022-2027_regional_aid_map_for_Greece.zip, hxxps://www.dropbox[.]com/s/State_aid__Commission_approves_2022-2027_regional_aid_map_for_Greece.zip?dl=1, hxxps://www.dropbox[.]com/s/EU_adopts_conclusions_on_EU_priorities_in_UN_human_rights_fora_in_2022.zip/?dl=1, hxxps://www.dropbox[.]com/s/EU%20adopts%20conclusions%20on%20EU%20priorities%20in%20UN%20human%20rights%20fora%20in%202022.zip/?dl=1, hxxps://uepspr[.]com/2023/EU%20adopts%20conclusions%20on%20EU%20priorities%20in%20UN%20human%20rights%20fora%20in%202022.zip, hxxps://uepspr[.]com/2023/EU_adopts_conclusions_on_EU_priorities_in_UN_human_rights_fora_in_2022.zip, hxxps://www.dropbox[.]com/s/EU_adopts_conclusions_on_EU_priorities_in_UN_human_rights_fora_in_2022.zip/?dl=1, hxxps://www.dropbox[.]com/s/EU%20adopts%20conclusions%20on%20EU%20priorities%20in%20UN%20human%20rights%20fora%20in%202022.zip/?dl=1, hxxps://uepspr[.]com/2023/EU%20adopts%20conclusions%20on%20EU%20priorities%20in%20UN%20human%20rights%20fora%20in%202022.zip, hxxps://uepspr[.]com/2023/EU_adopts_conclusions_on_EU_priorities_in_UN_human_rights_fora_in_2022.zip, https://upespr[.]com/Council_conclusions_on_the_European_security_situation.zip hxxps://45.154.14[.]235/mfa/Council%20conclusions%20on%20the%20European%20security%20situation.pdf, hxxp://www.zyber-i[.]com/europa/2022.zip, hxxps://69.90.184[.]125/lt/2023.rar, hxxps://45.154.14[.]235/2023/PotPlayer.exe, hxxps://45.154.14[.]235/2023/PotPlayer.dll, hxxps://45.154.14[.]235/2023/PotPlayerDB.dat, hxxp://103.107.104[.]19/2022/eu.docx, hxxp://103.107.104[.]19/FontEDL.exe, hxxp://103.107.104[.]19/DocConvDll.dll, hxxp://103.107.104[.]19/FontLog.dat, hxxps://69.90.184[.]125/lt/2022.pdf, hxxps://69.90.184[.]125/lt/FontEDL.exe, hxxps://69.90.184[.]125/lt/DocConvDll.dll, hxxps://69.90.184[.]125/lt/FontLog.dat, hxxps://45.154.14[.]235/State_aid__Commission_approves_2022-2027_regional_aid_map_for_Greece.pdf, hxxps://45.154.14[.]235/PotPlayer.exe, hxxps://45.154.14[.]235/PotPlayer.dll, </p>

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Type	Value
URLs	hxxps://45.154.14[.]235/PotPlayerDB.dat, hxxp://upespr[.]com/PotPlayerDB.dat, hxxp://upespr[.]com/State_aid__Commission_approves_2022-2027_regional_aid_map_for_Greece.pdf, hxxp://upespr[.]com/PotPlayer.dll, hxxp://upespr[.]com/PotPlayer.exe, hxxps://45.154.14[.]235/State_aid__Commission_approves_2022-2027_regional_aid_map_for_Greece.pdf, hxxps://45.154.14[.]235/PotPlayer.exe, hxxps://45.154.14[.]235/PotPlayer.dll, hxxps://45.154.14[.]235/PotPlayerDB.dat
Domain	upespr[.]com, www.zyber-i[.]com

References

<https://www.proofpoint.com/us/blog/threat-insight/good-bad-and-web-bug-ta416-increases-operational-tempo-against-european>
<https://www.securityweek.com/chinas-hacking-european-diplomats-aligns-russia-ukraine-conflict>