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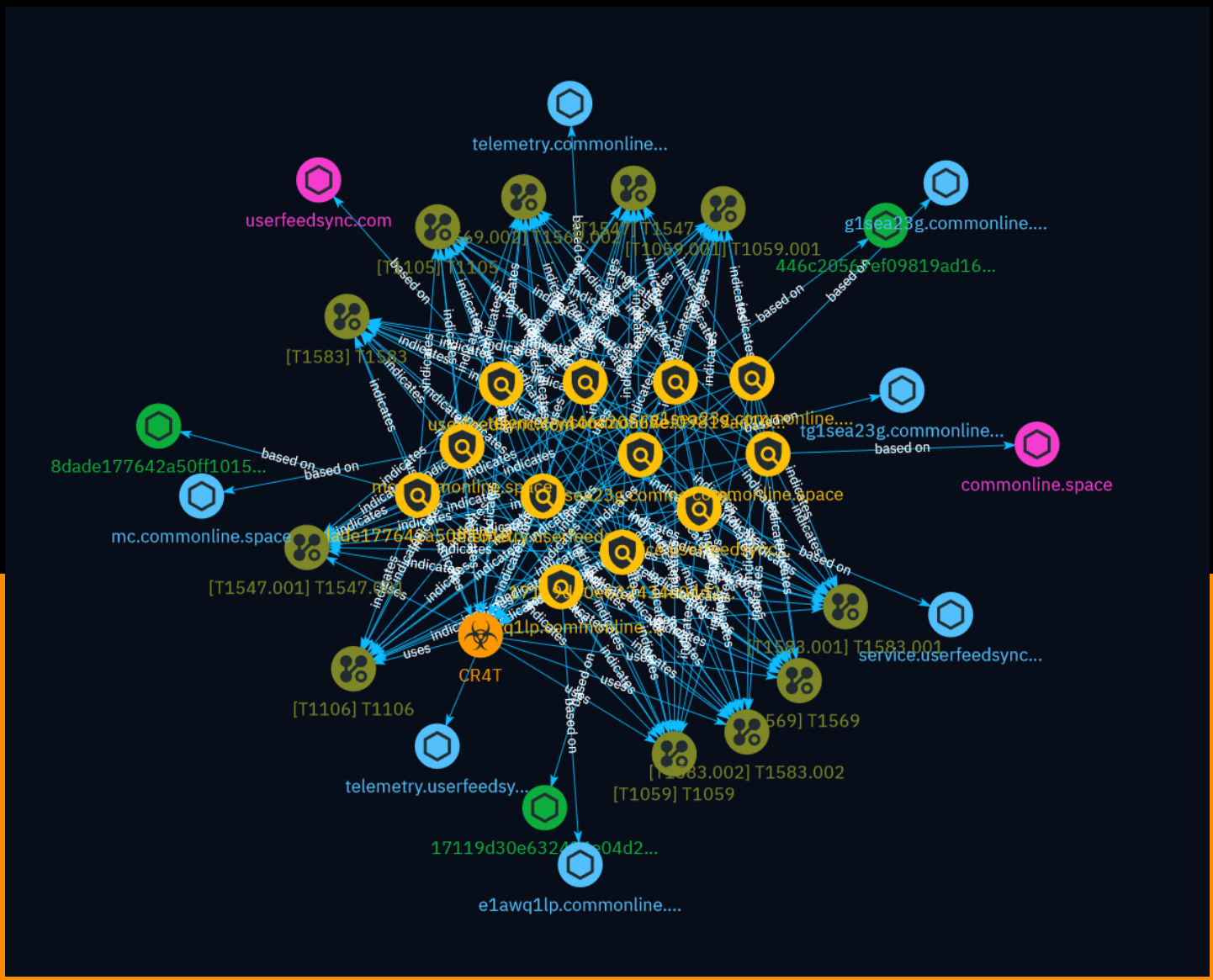
NETMANAGEIT

Intelligence Report

DuneQuixote campaign targets Middle Eastern entities with malware



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Overview

Description

In this analysis, we uncover a malicious campaign dubbed 'DuneQuixote' that employs droppers disguised as the legitimate Total Commander installer to deliver a backdoor implant called 'CR4T'. This implant, available in both C/C++ and Golang versions, grants attackers access to compromised systems, enabling command execution, file management, and persistence through scheduled tasks. The campaign exhibits advanced evasion techniques, including anti-analysis checks, memory-only payloads, and unique infrastructure designed for stealth. The primary targets appear to be government entities in the Middle East region.

Confidence

This value represents the confidence in the correctness of the data contained within this report.

100 / 100

Content

N/A

Indicator

Name
tg1sea23g.commonline.space
Pattern Type
stix
Pattern
[hostname:value = 'tg1sea23g.commonline.space']
Name
telemetry.userfeedsync.com
Pattern Type
stix
Pattern
[hostname:value = 'telemetry.userfeedsync.com']
Name
telemetry.commonline.space

Pattern Type
stix
Pattern
[hostname:value = 'telemetry.commonline.space']
Name
service.userfeedsync.com
Pattern Type
stix
Pattern
[hostname:value = 'service.userfeedsync.com']
Name
mc.commonline.space
Pattern Type
stix
Pattern
[hostname:value = 'mc.commonline.space']
Name
g1sea23g.commonline.space

Pattern Type

stix

Pattern

[hostname:value = 'g1sea23g.commonline.space']

Name

e1awq1lp.commonline.space

Pattern Type

stix

Pattern

[hostname:value = 'e1awq1lp.commonline.space']

Name

userfeedsync.com

Description

- **Unsafe:** False - **Server:** ope - **Domain Rank:** 0 - **DNS Valid:** True - **Parking:** False - **Spamming:** False - **Malware:** False - **Phishing:** False - **Suspicious:** True - **Adult:** False - **Category:** N/A - **Domain Age:** {'human': '3 months ago', 'timestamp': 1704697561, 'iso': '2024-01-08T02:06:01-05:00'} - **IPQS: Domain:** userfeedsync.com - **IPQS: IP Address:** 104.36.229.249

Pattern Type

stix

Pattern

[domain-name:value = 'userfeedsync.com']

Name

commonline.space

Description

- **Unsafe:** True - **Server:** N/A - **Domain Rank:** 0 - **DNS Valid:** True - **Parking:** False - **Spamming:** False - **Malware:** False - **Phishing:** True - **Suspicious:** True - **Adult:** False - **Category:** N/A - **Domain Age:** {'human': '4 months ago', 'timestamp': 1702423852, 'iso': '2023-12-12T18:30:52-05:00'} - **IPQS: Domain:** commonline.space - **IPQS: IP Address:** 135.148.113.161

Pattern Type

stix

Pattern

[domain-name:value = 'commonline.space']

Name

8dade177642a50ff101519b159d38a41aedf157df44f0a875310f7f21c2e9808

Pattern Type

stix

Pattern

[file:hashes.'SHA-256' = '8dade177642a50ff101519b159d38a41aedf157df44f0a875310f7f21c2e9808']

Name

446c20567ef09819ad160537f49efe9f242d8eacde86eb662571c0be56f0a00d

Pattern Type

stix

Pattern

[file:hashes.'SHA-256' = '446c20567ef09819ad160537f49efe9f242d8eacde86eb662571c0be56f0a00d']

Name

17119d30e632434e04d2106cf3d0b361d5c69180550e3db8ef07aa76c5e586dc

Pattern Type

stix

Pattern

[file:hashes.'SHA-256' = '17119d30e632434e04d2106cf3d0b361d5c69180550e3db8ef07aa76c5e586dc']

Malware

Name
CR4T

Attack-Pattern

Name
T1569.002
ID
T1569.002
Description
Adversaries may abuse the Windows service control manager to execute malicious commands or payloads. The Windows service control manager (`services.exe`) is an interface to manage and manipulate services.(Citation: Microsoft Service Control Manager) The service control manager is accessible to users via GUI components as well as system utilities such as `sc.exe` and [Net](https://attack.mitre.org/software/S0039). [PsExec](https://attack.mitre.org/software/S0029) can also be used to execute commands or payloads via a temporary Windows service created through the service control manager API.(Citation: Russinovich Sysinternals) Tools such as [PsExec](https://attack.mitre.org/software/S0029) and `sc.exe` can accept remote servers as arguments and may be used to conduct remote execution. Adversaries may leverage these mechanisms to execute malicious content. This can be done by either executing a new or modified service. This technique is the execution used in conjunction with [Windows Service](https://attack.mitre.org/techniques/T1543/003) during service persistence or privilege escalation.
Name
T1569
ID

T1569

Description

Adversaries may abuse system services or daemons to execute commands or programs. Adversaries can execute malicious content by interacting with or creating services either locally or remotely. Many services are set to run at boot, which can aid in achieving persistence ([Create or Modify System Process](https://attack.mitre.org/techniques/T1543)), but adversaries can also abuse services for one-time or temporary execution.

Name

T1547.001

ID

T1547.001

Description

Adversaries may achieve persistence by adding a program to a startup folder or referencing it with a Registry run key. Adding an entry to the "run keys" in the Registry or startup folder will cause the program referenced to be executed when a user logs in. (Citation: Microsoft Run Key) These programs will be executed under the context of the user and will have the account's associated permissions level. The following run keys are created by default on Windows systems: * `HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Run` * `HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\RunOnce` * `HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\Run` * `HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\RunOnce` Run keys may exist under multiple hives.(Citation: Microsoft Wow6432Node 2018)(Citation: Malwarebytes Wow6432Node 2016) The `HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\RunOnceEx` is also available but is not created by default on Windows Vista and newer. Registry run key entries can reference programs directly or list them as a dependency.(Citation: Microsoft Run Key) For example, it is possible to load a DLL at logon using a "Depend" key with RunOnceEx: `reg add HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\RunOnceEx\0001\Depend /v 1 /d "C:\temp\evil[.]dll"` (Citation: Oddvar Moe RunOnceEx Mar 2018) Placing a program within a

startup folder will also cause that program to execute when a user logs in. There is a startup folder location for individual user accounts as well as a system-wide startup folder that will be checked regardless of which user account logs in. The startup folder path for the current user is `C:\Users\\[Username]\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup`. The startup folder path for all users is `C:\ProgramData\Microsoft\Windows\Start Menu\Programs\StartUp`. The following Registry keys can be used to set startup folder items for persistence: * `HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\User Shell Folders` * `HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\Shell Folders` * `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Explorer\Shell Folders` * `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Explorer\User Shell Folders` The following Registry keys can control automatic startup of services during boot: * `HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\RunServicesOnce` * `HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\RunServicesOnce` * `HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\RunServices` * `HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\RunServices` Using policy settings to specify startup programs creates corresponding values in either of two Registry keys: * `HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\Policies\Explorer\Run` * `HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Policies\Explorer\Run` Programs listed in the load value of the registry key `HKEY_CURRENT_USER\Software\Microsoft\Windows NT\CurrentVersion\Windows` run automatically for the currently logged-on user. By default, the multistring `BootExecute` value of the registry key `HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\Session Manager` is set to `autocheck autochk *`. This value causes Windows, at startup, to check the file-system integrity of the hard disks if the system has been shut down abnormally. Adversaries can add other programs or processes to this registry value which will automatically launch at boot. Adversaries can use these configuration locations to execute malware, such as remote access tools, to maintain persistence through system reboots. Adversaries may also use [Masquerading](https://attack.mitre.org/techniques/T1036) to make the Registry entries look as if they are associated with legitimate programs.

Name
T1059.001

ID

T1059.001

Description

Adversaries may abuse PowerShell commands and scripts for execution. PowerShell is a powerful interactive command-line interface and scripting environment included in the Windows operating system.(Citation: TechNet PowerShell) Adversaries can use PowerShell to perform a number of actions, including discovery of information and execution of code. Examples include the `Start-Process` cmdlet which can be used to run an executable and the `Invoke-Command` cmdlet which runs a command locally or on a remote computer (though administrator permissions are required to use PowerShell to connect to remote systems). PowerShell may also be used to download and run executables from the Internet, which can be executed from disk or in memory without touching disk. A number of PowerShell-based offensive testing tools are available, including [Empire](https://attack.mitre.org/software/S0363), [PowerSploit](https://attack.mitre.org/software/S0194), [PoshC2](https://attack.mitre.org/software/S0378), and PSAttack.(Citation: Github PSAttack) PowerShell commands/scripts can also be executed without directly invoking the `powershell.exe` binary through interfaces to PowerShell's underlying `System.Management.Automation` assembly DLL exposed through the .NET framework and Windows Common Language Interface (CLI).(Citation: Sixdub PowerPick Jan 2016)(Citation: SilentBreak Offensive PS Dec 2015)(Citation: Microsoft PSfromCsharp APR 2014)

Name

T1059

ID

T1059

Description

Adversaries may abuse command and script interpreters to execute commands, scripts, or binaries. These interfaces and languages provide ways of interacting with computer systems and are a common feature across many different platforms. Most systems come with some built-in command-line interface and scripting capabilities, for example, macOS and Linux distributions include some flavor of [Unix Shell](https://attack.mitre.org/

techniques/T1059/004) while Windows installations include the [Windows Command Shell](https://attack.mitre.org/techniques/T1059/003) and [PowerShell](https://attack.mitre.org/techniques/T1059/001). There are also cross-platform interpreters such as [Python](https://attack.mitre.org/techniques/T1059/006), as well as those commonly associated with client applications such as [JavaScript](https://attack.mitre.org/techniques/T1059/007) and [Visual Basic](https://attack.mitre.org/techniques/T1059/005). Adversaries may abuse these technologies in various ways as a means of executing arbitrary commands. Commands and scripts can be embedded in [Initial Access](https://attack.mitre.org/tactics/TA0001) payloads delivered to victims as lure documents or as secondary payloads downloaded from an existing C2. Adversaries may also execute commands through interactive terminals/shells, as well as utilize various [Remote Services](https://attack.mitre.org/techniques/T1021) in order to achieve remote Execution. (Citation: Powershell Remote Commands)(Citation: Cisco IOS Software Integrity Assurance - Command History)(Citation: Remote Shell Execution in Python)

Name

T1105

ID

T1105

Description

Adversaries may transfer tools or other files from an external system into a compromised environment. Tools or files may be copied from an external adversary-controlled system to the victim network through the command and control channel or through alternate protocols such as [ftp](https://attack.mitre.org/software/S0095). Once present, adversaries may also transfer/spread tools between victim devices within a compromised environment (i.e. [Lateral Tool Transfer](https://attack.mitre.org/techniques/T1570)). On Windows, adversaries may use various utilities to download tools, such as `copy`, `finger`, [certutil](https://attack.mitre.org/software/S0160), and [PowerShell](https://attack.mitre.org/techniques/T1059/001) commands such as `IEX(New-Object Net.WebClient).downloadString()` and `Invoke-WebRequest`. On Linux and macOS systems, a variety of utilities also exist, such as `curl`, `scp`, `sftp`, `tftp`, `rsync`, `finger`, and `wget`. (Citation: t1105_lolbas) Adversaries may also abuse installers and package managers, such as `yum` or `winget`, to download tools to victim hosts. Files can also be transferred using various [Web Service](https://attack.mitre.org/techniques/T1102)s as well as native or otherwise present tools on the victim system.(Citation: PTSecurity Cobalt Dec 2016) In some cases, adversaries may be able to leverage services that sync between a web-based and

an on-premises client, such as Dropbox or OneDrive, to transfer files onto victim systems. For example, by compromising a cloud account and logging into the service's web portal, an adversary may be able to trigger an automatic syncing process that transfers the file onto the victim's machine.(Citation: Dropbox Malware Sync)

Name

T1583.001

ID

T1583.001

Description

Adversaries may acquire domains that can be used during targeting. Domain names are the human readable names used to represent one or more IP addresses. They can be purchased or, in some cases, acquired for free. Adversaries may use acquired domains for a variety of purposes, including for [Phishing](https://attack.mitre.org/techniques/T1566), [Drive-by Compromise](https://attack.mitre.org/techniques/T1189), and Command and Control.(Citation: CISA MSS Sep 2020) Adversaries may choose domains that are similar to legitimate domains, including through use of homoglyphs or use of a different top-level domain (TLD).(Citation: FireEye APT28)(Citation: PaypalScam) Typosquatting may be used to aid in delivery of payloads via [Drive-by Compromise](https://attack.mitre.org/techniques/T1189). Adversaries may also use internationalized domain names (IDNs) and different character sets (e.g. Cyrillic, Greek, etc.) to execute "IDN homograph attacks," creating visually similar lookalike domains used to deliver malware to victim machines.(Citation: CISA IDN ST05-016)(Citation: tt_httrack_fake_domains)(Citation: tt_obliqueRAT)(Citation: httrack_unhcr)(Citation: lazgroup_idn_phishing) Adversaries may also acquire and repurpose expired domains, which may be potentially already allowlisted/trusted by defenders based on an existing reputation/history.(Citation: Categorisation_not_boundary)(Citation: Domain_Steal_CC)(Citation: Redirectors_Domain_Fronting)(Citation: bypass_webproxy_filtering) Domain registrars each maintain a publicly viewable database that displays contact information for every registered domain. Private WHOIS services display alternative information, such as their own company data, rather than the owner of the domain. Adversaries may use such private WHOIS services to obscure information about who owns a purchased domain. Adversaries may further interrupt efforts to track their infrastructure by using varied registration information and purchasing domains with different domain registrars.(Citation: Mandiant APT1)

Name

T1106

ID

T1106

Description

Adversaries may interact with the native OS application programming interface (API) to execute behaviors. Native APIs provide a controlled means of calling low-level OS services within the kernel, such as those involving hardware/devices, memory, and processes. (Citation: NT API Windows)(Citation: Linux Kernel API) These native APIs are leveraged by the OS during system boot (when other system components are not yet initialized) as well as carrying out tasks and requests during routine operations. Adversaries may abuse these OS API functions as a means of executing behaviors. Similar to [Command and Scripting Interpreter](https://attack.mitre.org/techniques/T1059), the native API and its hierarchy of interfaces provide mechanisms to interact with and utilize various components of a victimized system. Native API functions (such as `NtCreateProcess`) may be directed invoked via system calls / syscalls, but these features are also often exposed to user-mode applications via interfaces and libraries.(Citation: OutFlank System Calls)(Citation: CyberBit System Calls)(Citation: MDSec System Calls) For example, functions such as the Windows API `CreateProcess()` or GNU `fork()` will allow programs and scripts to start other processes.(Citation: Microsoft CreateProcess)(Citation: GNU Fork) This may allow API callers to execute a binary, run a CLI command, load modules, etc. as thousands of similar API functions exist for various system operations.(Citation: Microsoft Win32)(Citation: LIBC)(Citation: GLIBC) Higher level software frameworks, such as Microsoft .NET and macOS Cocoa, are also available to interact with native APIs. These frameworks typically provide language wrappers/abstractions to API functionalities and are designed for ease-of-use/portability of code.(Citation: Microsoft NET)(Citation: Apple Core Services)(Citation: MACOS Cocoa)(Citation: macOS Foundation) Adversaries may use assembly to directly or in-directly invoke syscalls in an attempt to subvert defensive sensors and detection signatures such as user mode API-hooks.(Citation: Redops Syscalls) Adversaries may also attempt to tamper with sensors and defensive tools associated with API monitoring, such as unhooking monitored functions via [Disable or Modify Tools](https://attack.mitre.org/techniques/T1562/001).

Name

T1547

ID

T1547

Description

Adversaries may configure system settings to automatically execute a program during system boot or logon to maintain persistence or gain higher-level privileges on compromised systems. Operating systems may have mechanisms for automatically running a program on system boot or account logon.(Citation: Microsoft Run Key)(Citation: MSDN Authentication Packages)(Citation: Microsoft TimeProvider)(Citation: Cylance Reg Persistence Sept 2013)(Citation: Linux Kernel Programming) These mechanisms may include automatically executing programs that are placed in specially designated directories or are referenced by repositories that store configuration information, such as the Windows Registry. An adversary may achieve the same goal by modifying or extending features of the kernel. Since some boot or logon autostart programs run with higher privileges, an adversary may leverage these to elevate privileges.

Name

T1583.002

ID

T1583.002

Description

Adversaries may set up their own Domain Name System (DNS) servers that can be used during targeting. During post-compromise activity, adversaries may utilize DNS traffic for various tasks, including for Command and Control (ex: [Application Layer Protocol](https://attack.mitre.org/techniques/T1071)). Instead of hijacking existing DNS servers, adversaries may opt to configure and run their own DNS servers in support of operations. By running their own DNS servers, adversaries can have more control over how they administer server-side DNS C2 traffic ([DNS](https://attack.mitre.org/techniques/T1071/004)). With control over a DNS server, adversaries can configure DNS applications to provide

conditional responses to malware and, generally, have more flexibility in the structure of the DNS-based C2 channel.(Citation: Unit42 DNS Mar 2019)

Name

T1583

ID

T1583

Description

Adversaries may buy, lease, or rent infrastructure that can be used during targeting. A wide variety of infrastructure exists for hosting and orchestrating adversary operations. Infrastructure solutions include physical or cloud servers, domains, and third-party web services.(Citation: TrendmicroHideoutsLease) Additionally, botnets are available for rent or purchase. Use of these infrastructure solutions allows adversaries to stage, launch, and execute operations. Solutions may help adversary operations blend in with traffic that is seen as normal, such as contacting third-party web services or acquiring infrastructure to support [Proxy](https://attack.mitre.org/techniques/T1090), including from residential proxy services.(Citation: amnesty_nso_pegasus)(Citation: FBI Proxies Credential Stuffing) (Citation: Mandiant APT29 Microsoft 365 2022) Depending on the implementation, adversaries may use infrastructure that makes it difficult to physically tie back to them as well as utilize infrastructure that can be rapidly provisioned, modified, and shut down.

Hostname

Value
tg1sea23g.commonline.space
telemetry.userfeedsync.com
telemetry.commonline.space
service.userfeedsync.com
mc.commonline.space
g1sea23g.commonline.space
e1awq1lp.commonline.space

Domain-Name

Value
userfeedsync.com
commonline.space

StixFile

Value
8dade177642a50ff101519b159d38a41aedf157df44f0a875310f7f21c2e9808
446c20567ef09819ad160537f49efe9f242d8eacde86eb662571c0be56f0a00d
17119d30e632434e04d2106cf3d0b361d5c69180550e3db8ef07aa76c5e586dc

External References

- https://securelist.com/dunequixote/112425/
- https://otx.alienvault.com/pulse/66223e1cede32248a7eebae9