

NETMANAGEIT

Intelligence Report

This Spider Bytes Like Ice

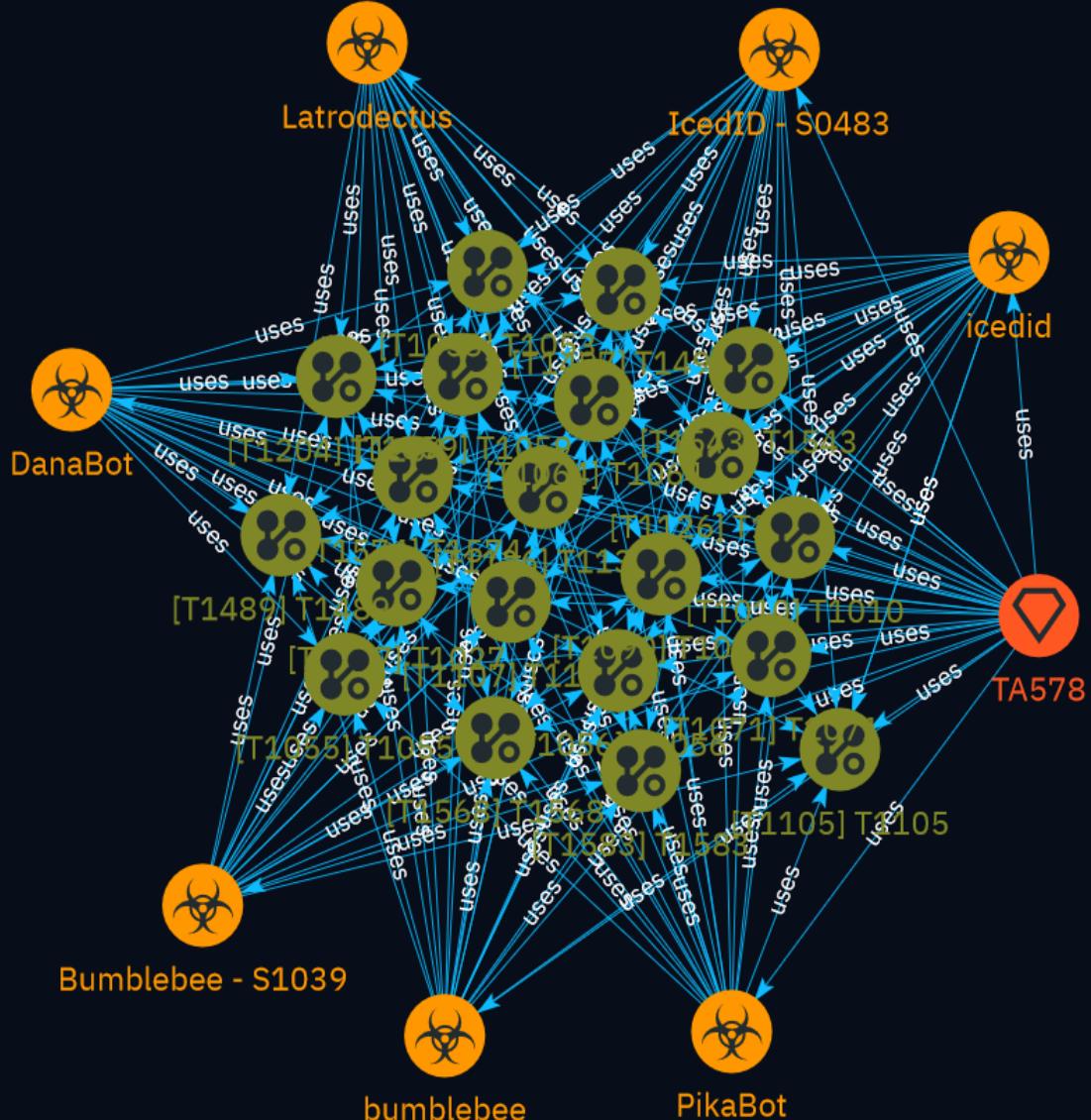


Table of contents

Overview

● Description	3
● Confidence	3
● Content	4

Entities

● Attack-Pattern	5
● Malware	17
● Intrusion-Set	19

External References

● External References	20
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Overview

Description

Proofpoint first observed new malware named Latrodectus in late November 2023, employed in email campaigns. While Latrodectus usage declined in December 2023 and January 2024, it resurged in February and March 2024 campaigns. Initially distributed by threat actor TA577 but later adopted by TA578, Latrodectus is an emerging downloader with sandbox evasion capabilities. Although sharing similarities with IcedID, researchers confirmed Latrodectus as a new malware likely created by IcedID's developers, exhibiting infrastructure overlap with historic IcedID operations.

Confidence

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

100 / 100

Content

N/A

Attack-Pattern

Name
T1126
ID
T1126
Name
T1107
ID
T1107
Name
T1136
ID
T1136
Description
Adversaries may create an account to maintain access to victim systems. With a sufficient level of access, creating such accounts may be used to establish secondary credentials.

access that do not require persistent remote access tools to be deployed on the system. Accounts may be created on the local system or within a domain or cloud tenant. In cloud environments, adversaries may create accounts that only have access to specific services, which can reduce the chance of detection.

Name

T1056

ID

T1056

Description

Adversaries may use methods of capturing user input to obtain credentials or collect information. During normal system usage, users often provide credentials to various different locations, such as login pages/portals or system dialog boxes. Input capture mechanisms may be transparent to the user (e.g. [Credential API Hooking](<https://attack.mitre.org/techniques/T1056/004>)) or rely on deceiving the user into providing input into what they believe to be a genuine service (e.g. [Web Portal Capture](<https://attack.mitre.org/techniques/T1056/003>)).

Name

T1574

ID

T1574

Description

Adversaries may execute their own malicious payloads by hijacking the way operating systems run programs. Hijacking execution flow can be for the purposes of persistence, since this hijacked execution may reoccur over time. Adversaries may also use these mechanisms to elevate privileges or evade defenses, such as application control or other restrictions on execution. There are many ways an adversary may hijack the flow of

execution, including by manipulating how the operating system locates programs to be executed. How the operating system locates libraries to be used by a program can also be intercepted. Locations where the operating system looks for programs/resources, such as file directories and in the case of Windows the Registry, could also be poisoned to include malicious payloads.

Name

T1064

ID

T1064

Description

This technique has been deprecated. Please use [Command and Scripting Interpreter] (<https://attack.mitre.org/techniques/T1059>) where appropriate. Adversaries may use scripts to aid in operations and perform multiple actions that would otherwise be manual. Scripting is useful for speeding up operational tasks and reducing the time required to gain access to critical resources. Some scripting languages may be used to bypass process monitoring mechanisms by directly interacting with the operating system at an API level instead of calling other programs. Common scripting languages for Windows include VBScript and [PowerShell] (<https://attack.mitre.org/techniques/T1086>) but could also be in the form of command-line batch scripts. Scripts can be embedded inside Office documents as macros that can be set to execute when files used in [Spearphishing Attachment] (<https://attack.mitre.org/techniques/T1193>) and other types of spearphishing are opened. Malicious embedded macros are an alternative means of execution than software exploitation through [Exploitation for Client Execution] (<https://attack.mitre.org/techniques/T1203>), where adversaries will rely on macros being allowed or that the user will accept to activate them. Many popular offensive frameworks exist which use forms of scripting for security testers and adversaries alike. Metasploit (Citation: Metasploit_Ref), Veil (Citation: Veil_Ref), and PowerSploit (Citation: Powersploit) are three examples that are popular among penetration testers for exploit and post-compromise operations and include many features for evading defenses. Some adversaries are known to use PowerShell. (Citation: Alperovitch 2014)

Name

T1568

ID

T1568

Description

Adversaries may dynamically establish connections to command and control infrastructure to evade common detections and remediations. This may be achieved by using malware that shares a common algorithm with the infrastructure the adversary uses to receive the malware's communications. These calculations can be used to dynamically adjust parameters such as the domain name, IP address, or port number the malware uses for command and control. Adversaries may use dynamic resolution for the purpose of [Fallback Channels](<https://attack.mitre.org/techniques/T1008>). When contact is lost with the primary command and control server malware may employ dynamic resolution as a means to reestablishing command and control.(Citation: Talos CCleaner 2017)(Citation: FireEye POSHSPY April 2017)(Citation: ESET Sednit 2017 Activity)

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

T1090

ID

T1090

Description

Adversaries may use a connection proxy to direct network traffic between systems or act as an intermediary for network communications to a command and control server to avoid direct connections to their infrastructure. Many tools exist that enable traffic redirection through proxies or port redirection, including [HTRAN](<https://attack.mitre.org/software/S0040>), ZXProxy, and ZXPortMap. (Citation: Trend Micro APT Attack Tools) Adversaries use these types of proxies to manage command and control communications, reduce the number of simultaneous outbound network connections, provide resiliency in the face of connection loss, or to ride over existing trusted communications paths between victims to avoid suspicion. Adversaries may chain together multiple proxies to further disguise the source of malicious traffic. Adversaries can also take advantage of routing schemes in Content Delivery Networks (CDNs) to proxy command and control traffic.

Name

T1027

ID

T1027

Description

Adversaries may attempt to make an executable or file difficult to discover or analyze by encrypting, encoding, or otherwise obfuscating its contents on the system or in transit. This is common behavior that can be used across different platforms and the network to evade defenses. Payloads may be compressed, archived, or encrypted in order to avoid detection. These payloads may be used during Initial Access or later to mitigate detection. Sometimes a user's action may be required to open and [Deobfuscate/Decode Files or Information](<https://attack.mitre.org/techniques/T1140>) for [User Execution](<https://attack.mitre.org/techniques/T1204>). The user may also be required to input a password to open a password protected compressed/encrypted file that was provided by the adversary. (Citation: Volexity PowerDuke November 2016) Adversaries may also use compressed or archived scripts, such as JavaScript. Portions of files can also be encoded to hide the plain-text strings that would otherwise help defenders with discovery. (Citation: Linux/Cdorked.A We Live Security Analysis) Payloads may also be split into separate, seemingly benign files that only reveal malicious functionality when reassembled. (Citation: Carbon Black Obfuscation Sept 2016) Adversaries may also abuse [Command Obfuscation](<https://attack.mitre.org/techniques/T1027/010>) to obscure commands executed from payloads or directly via [Command and Scripting Interpreter](<https://attack.mitre.org/techniques/T1059>). Environment variables, aliases, characters, and other platform/language specific semantics can be used to evade signature based detections and application control mechanisms. (Citation: FireEye Obfuscation June 2017) (Citation: FireEye Revoke-Obfuscation July 2017)(Citation: PaloAlto EncodedCommand March 2017)

Name

T1497

ID

T1497

Description

Adversaries may employ various means to detect and avoid virtualization and analysis environments. This may include changing behaviors based on the results of checks for the presence of artifacts indicative of a virtual machine environment (VME) or sandbox. If the

adversary detects a VME, they may alter their malware to disengage from the victim or conceal the core functions of the implant. They may also search for VME artifacts before dropping secondary or additional payloads. Adversaries may use the information learned from [Virtualization/Sandbox Evasion](<https://attack.mitre.org/techniques/T1497>) during automated discovery to shape follow-on behaviors.(Citation: Deloitte Environment Awareness) Adversaries may use several methods to accomplish [Virtualization/Sandbox Evasion](<https://attack.mitre.org/techniques/T1497>) such as checking for security monitoring tools (e.g., Sysinternals, Wireshark, etc.) or other system artifacts associated with analysis or virtualization. Adversaries may also check for legitimate user activity to help determine if it is in an analysis environment. Additional methods include use of sleep timers or loops within malware code to avoid operating within a temporary sandbox. (Citation: Unit 42 Pirpi July 2015)

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

T1204

ID

T1204

Description

An adversary may rely upon specific actions by a user in order to gain execution. Users may be subjected to social engineering to get them to execute malicious code by, for example, opening a malicious document file or link. These user actions will typically be observed as follow-on behavior from forms of [Phishing](<https://attack.mitre.org/techniques/T1566>). While [User Execution](<https://attack.mitre.org/techniques/T1204>) frequently occurs shortly after Initial Access it may occur at other phases of an intrusion, such as when an adversary places a file in a shared directory or on a user's desktop hoping that a user will click on it. This activity may also be seen shortly after [Internal Spearphishing](<https://attack.mitre.org/techniques/T1534>). Adversaries may also deceive users into performing actions such as enabling [Remote Access Software](<https://attack.mitre.org/techniques/T1219>), allowing direct control of the system to the adversary, or downloading and executing malware for [User Execution](<https://attack.mitre.org/techniques/T1204>). For example, tech support scams can be facilitated through [Phishing](<https://attack.mitre.org/techniques/T1566>), vishing, or various forms of user interaction. Adversaries can use a combination of these methods, such as spoofing and promoting toll-free numbers or call centers that are used to direct victims to malicious websites, to deliver and execute payloads containing malware or [Remote Access Software](<https://attack.mitre.org/techniques/T1219>).(Citation: Telephone Attack Delivery)

Name

T1010

ID

T1010

Description

Adversaries may attempt to get a listing of open application windows. Window listings could convey information about how the system is used.(Citation: Prevailion DarkWatchman 2021) For example, information about application windows could be used to identify potential data to collect as well as identifying security tooling ([Security Software Discovery])(<https://attack.mitre.org/techniques/T1518/001>) to evade.(Citation: ESET Grandoreiro April 2020) Adversaries typically abuse system features for this type of enumeration. For example, they may gather information through native system features such as [Command and Scripting Interpreter] (<https://attack.mitre.org/techniques/T1059>) commands and [Native API] (<https://attack.mitre.org/techniques/T1106>) functions.

Name

T1055

ID

T1055

Description

Adversaries may inject code into processes in order to evade process-based defenses as well as possibly elevate privileges. Process injection is a method of executing arbitrary code in the address space of a separate live process. Running code in the context of another process may allow access to the process's memory, system/network resources, and possibly elevated privileges. Execution via process injection may also evade detection from security products since the execution is masked under a legitimate process. There are many different ways to inject code into a process, many of which abuse legitimate functionalities. These implementations exist for every major OS but are typically platform specific. More sophisticated samples may perform multiple process injections to segment modules and further evade detection, utilizing named pipes or other inter-process communication (IPC) mechanisms as a communication channel.

Name

T1053

ID

T1053

Description

Adversaries may abuse task scheduling functionality to facilitate initial or recurring execution of malicious code. Utilities exist within all major operating systems to schedule programs or scripts to be executed at a specified date and time. A task can also be scheduled on a remote system, provided the proper authentication is met (ex: RPC and file and printer sharing in Windows environments). Scheduling a task on a remote system typically may require being a member of an admin or otherwise privileged group on the remote system.(Citation: TechNet Task Scheduler Security) Adversaries may use task scheduling to execute programs at system startup or on a scheduled basis for persistence. These mechanisms can also be abused to run a process under the context of a specified account (such as one with elevated permissions/privileges). Similar to [System Binary Proxy Execution](<https://attack.mitre.org/techniques/T1218>), adversaries have also abused task scheduling to potentially mask one-time execution under a trusted system process. (Citation: ProofPoint Serpent)

Name

T1071

ID

T1071

Description

Adversaries may communicate using OSI application layer protocols to avoid detection/network filtering by blending in with existing traffic. Commands to the remote system, and often the results of those commands, will be embedded within the protocol traffic between the client and server. Adversaries may utilize many different protocols, including those used for web browsing, transferring files, electronic mail, or DNS. For connections

that occur internally within an enclave (such as those between a proxy or pivot node and other nodes), commonly used protocols are SMB, SSH, or RDP.

Name
ID
Description
T1489
T1489
<p>Adversaries may stop or disable services on a system to render those services unavailable to legitimate users. Stopping critical services or processes can inhibit or stop response to an incident or aid in the adversary's overall objectives to cause damage to the environment.(Citation: Talos Olympic Destroyer 2018)(Citation: Novetta Blockbuster) Adversaries may accomplish this by disabling individual services of high importance to an organization, such as `MSExchangeIS`, which will make Exchange content inaccessible (Citation: Novetta Blockbuster). In some cases, adversaries may stop or disable many or all services to render systems unusable.(Citation: Talos Olympic Destroyer 2018) Services or processes may not allow for modification of their data stores while running. Adversaries may stop services or processes in order to conduct [Data Destruction](https://attack.mitre.org/techniques/T1485) or [Data Encrypted for Impact](https://attack.mitre.org/techniques/T1486) on the data stores of services like Exchange and SQL Server.(Citation: SecureWorks WannaCry Analysis)</p>
Name
T1543
ID
T1543
Description

Adversaries may create or modify system-level processes to repeatedly execute malicious payloads as part of persistence. When operating systems boot up, they can start processes that perform background system functions. On Windows and Linux, these system processes are referred to as services.(Citation: TechNet Services) On macOS, launchd processes known as [Launch Daemon](<https://attack.mitre.org/techniques/T1543/004>) and [Launch Agent](<https://attack.mitre.org/techniques/T1543/001>) are run to finish system initialization and load user specific parameters.(Citation: AppleDocs Launch Agent Daemons) Adversaries may install new services, daemons, or agents that can be configured to execute at startup or a repeatable interval in order to establish persistence. Similarly, adversaries may modify existing services, daemons, or agents to achieve the same effect. Services, daemons, or agents may be created with administrator privileges but executed under root/SYSTEM privileges. Adversaries may leverage this functionality to create or modify system processes in order to escalate privileges.(Citation: OSX Malware Detection)

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.

Malware

Name
Latroductus
Name
Bumblebee - S1039
Name
IcedID - S0483
Name
PikaBot
Name
DanaBot
Name
icedid
Description
[IcedID](https://attack.mitre.org/software/S0483) is a modular banking malware designed to steal financial information that has been observed in the wild since at least 2017.

[IcedID](<https://attack.mitre.org/software/S0483>) has been downloaded by [Emotet] (<https://attack.mitre.org/software/S0367>) in multiple campaigns.(Citation: IBM IcedID November 2017)(Citation: Juniper IcedID June 2020)

Name
bumblebee
Description
[Bumblebee](https://attack.mitre.org/software/S1039) is a custom loader written in C++ that has been used by multiple threat actors, including possible initial access brokers, to download and execute additional payloads since at least March 2022. [Bumblebee](https://attack.mitre.org/software/S1039) has been linked to ransomware operations including [Conti](https://attack.mitre.org/software/S0575), Quantum, and Mountlocker and derived its name from the appearance of "bumblebee" in the user-agent.(Citation: Google EXOTIC LILY March 2022)(Citation: Proofpoint Bumblebee April 2022)(Citation: Symantec Bumblebee June 2022)

Intrusion-Set

Name
TA578

External References

- <https://www.proofpoint.com/us/blog/threat-insight/latroductus-spider-bytes-ice>
- <https://otx.alienvault.com/pulse/660efeff522f4fd488a22ec>
