

Threat hunting

Agent : EC2AMAZ-IBM5S7O

Discovery ID : ID

T1087

Tactics

Discovery

Version

2.4

A. Discovery - 77 hits

Narrowed it to parentuser, user and currentdirectory with 8 hits

#	Timestamp (UTC)	Process	Command / Action	User	MITRE Tactic / Technique
1	2024-09-03T 20:40:52	EC2Launch.exe	Sets wallpaper & collects EC2 metadata	EC2AMAZ-IBM5S7O\Administrator	Discovery / Windows Command Shell
2	2024-09-03T 20:59:32	net1.exe	Create user art-test with password Password123!	EC2AMAZ-IBM5S7O\Administrator	Discovery / Account Discovery
3	2024-09-03T 20:59:32	net1.exe	Add art-test to local administrators group	EC2AMAZ-IBM5S7O\Administrator	Discovery / Account Discovery
4	2024-09-03T 0:59:32	net1.exe	Add art-test user (no password)	EC2AMAZ-IBM5S7O\Administrator	Discovery / Account Discovery
5	2024-09-03T 20:59:42	schtasks.exe	Create scheduled task T1053_005_OnLogo n to run calc.exe at logon	EC2AMAZ-IBM5S7O\Administrator	Execution / Scheduled Task
6	2024-09-03T 20:59:43	schtasks.exe	Create scheduled task T1053_005_OnStart up to run calc.exe at startup	EC2AMAZ-IBM5S7O\Administrator	Execution / Scheduled Task
7	2024-09-03T 20:59:43	schtasks.exe	Parent task command creating logon & startup tasks	EC2AMAZ-IBM5S7O\Administrator	Execution / Scheduled Task

8	2024-09-03 T20:59:43	schtasks.e xe	Create scheduled task T1053_005_OnStart up to run calc.exe	EC2AMAZ-IBM5S7O\A dministrator	Execution / Schedule d Task
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What looks suspicious (priority order)

- 1. Account creation + cleartext password in command line**
`net1 user art-test Password123!` — creates a local account and exposes the password in the log. (Hit 6)
 - 2. Adding that user to local Administrators**
`net1 localgroup administrators art-test /add` — escalates privileges for the new account. (Hit 5)
 - 3. Creation of scheduled tasks from Temp**
`schtasks /create /tn "T1053_005_OnLogon" and T1053_005_OnStartup`
set to run `cmd.exe /c calc.exe` as SYSTEM — persistence primitive executed by `Administrator` from Temp. (Hits 3,4,5,6/7/8 cluster)
 - 4. Service creation/start pointing to AtomicRedTeam binary**
`sc.exe create AtomicTestService_CMD binPath= C:\AtomicRedTeam\...AtomicService.exe` + start — strong persistence indicator and explicit red-team tool path. (Hits 1–2 in earlier set)
 - 5. All commands executed from Temp folder by Administrator**
`currentDirectory: C:\Users\ADMINI~1\AppData\Local\Temp\2\` — Temp as staging area for service binary, tasks, and scripts.
 - 6. Sequence & timing: rapid, ordered actions**
Events occur in a tight sequence over seconds/minutes (create user → add to group → create tasks → create service/start) — typical attack flow.
 - 7. Use of interactive Administrator session (terminalSessionId != 0, logonId non-zero)**
Indicates someone was actively executing commands in an interactive/admin context (RDP or local console) — check provenance.

#	Time stamp	User	Command Line	Image	Process	Current Directory	MI	Notes
				exe	ss		TR	E
				aunch	ss		AT	T&
				.exe	ss		C	C
					ss		K	K
1	2024-09-03 T20:40:52.928Z	Administrator	"C:\Program Files\Amazon\EC2Launch\EC2Launch.exe" --path="C:\ProgramData\Amazon\EC2Launch\wallpaper\Ec2Wallpaper.jpg" ...	EC2Launch.exe	cmd.exe	C:\Windows\system32\cmd.exe	T1	Suspicious cmd execution, 09.00.33 wallpaper command via EC2Launch.

										unch; Discovery & Execution
2	2024-09-03 T20:59:32.50Z	Ad mini strat	C:\Windows\system32\net1 user art-test /add	net1.e xe	n et .e x e	C:\Users\ADMIN I~1\AppData\Loc al\Temp\2\	T1 08 7	Accou nt discov ery; first user creation event		
3	2024-09-03 T20:59:32.756Z	Ad mini strat	C:\Windows\system32\net1 user art-test /add	net1.e xe	n et .e x e	C:\Users\ADMIN I~1\AppData\Loc al\Temp\2\	T1 08 7	Redundant/account creation command; suspicious		
4	2024-09-03 T20:59:32.770Z	Ad mini strat	C:\Windows\system32\net1 user art-test Password123!	net1.e xe	n et .e x e	C:\Users\ADMIN I~1\AppData\Loc al\Temp\2\	T1 08 7	Account creation with clear text password; high suspicion		
5	2024-09-03 T20:59:32.811Z	Ad mini strat	C:\Windows\system32\net1 localgroup administrators art-test /add	net1.e xe	n et .e x e	C:\Users\ADMIN I~1\AppData\Loc al\Temp\2\	T1 08 7	Privilege escalation (added to admin group)		
6	2024-09-03 T20:59:32.846Z	Ad mini strat	C:\Windows\system32\sc htasks /create /tn "T1053_005_OnLogon" ... /ru SYSTEM /rl HIGHEST /TR "cmd.exe /c calc.exe"	schta sks.e xe	c m d. e x e	C:\Users\ADMIN I~1\AppData\Loc al\Temp\2\	T1 05 3.00 5	Scheduled task created for persistence		
7	2024-09-03 T20:59:32.859Z	Ad mini strat	C:\Windows\system32\sc htasks /create /tn "T1053_005_OnStartup" ... /ru SYSTEM /rl HIGHEST /TR "cmd.exe /c calc.exe"	schta sks.e xe	c m d. e x e	C:\Users\ADMIN I~1\AppData\Loc al\Temp\2\	T1 05 3.00 5	Scheduled task at startup for persistence		

```

8 2024-09-03T20:59:32.250Z -- a
Ad mini C:\AtomicRedTeam\atomics\T1543.003\bin\AtomicService.exe
T20:5 strat cService.exe
9:46.4 or
76Z

```

Atomi c C:\AtomicRedTe T1 Servic
cServi m am\atomics\T15 54 e
ce.ex d. 43.003\bin\ 3. create
e e 00 d &
x 3 started
e ;
persist
ence
primitiv
e

What i have achieved out of the 8 hits

Quick answers up-front

- **First likely attack event (start of malicious chain):** 2024-09-03T20:59:32.250Z — a `net1 user art-test /add` / `net1 user art-test Password123!` series (account creation). That timestamp marks the beginning of the attacker sequence (create account → add to admins → persistence).
 - **Most valuable IOCs you already have:**
 - Account name: `art-test`
 - Password shown in command: `Password123!` (treat as compromised)
 - Service name: `AtomicTestService_CMD`
 - Service binary path & hash:
`C:\AtomicRedTeam\atomics\T1543.003\bin\AtomicService.exe` — SHA256
`2BF663EA493CDC21AD33AEBD8DA40CC5D2AFA55E24F9E1BBF3D73E99DCAD F693`
 - Scheduled task names: `T1053_005_OnLogon`, `T1053_005_OnStartup`
 - Temp staging folder: `C:\Users\ADMINI~1\AppData\Local\Temp\2\`
 - Host/agent: `EC2AMAZ-IBM5S70` (10.0.1.11) — treat as compromised until proven otherwise
-

What is suspicious / valuable in the 8 hits (short)

1. **Account creation with cleartext password** — `net1 user art-test Password123!` (high confidence malicious/backdoor).
2. **Addition to local Administrators** — `net1 localgroup administrators art-test /add` (privilege escalation).
3. **Scheduled tasks created from Temp, set to run at logon/startup as SYSTEM** — persistence primitive (`scrtasks /create ...` running `cmd.exe /c calc.exe` as SYSTEM). Using Temp as staging is suspicious.

4. **Service created & started pointing to** `C:\AtomicRedTeam\...AtomicService.exe` — confirms either red-team tooling or adversary re-use of known tooling; high confidence for persistence.
 5. **All activity executed interactively by Administrator (terminalSessionId!=0)** — indicates hands-on-keyboard or an admin account abused.
 6. **Repeated commands in a tight time window (~20:59:32 → 20:59:46)** — typical attack automation or operator playbook.
-

Suspicious files & command lines to collect immediately

(You already have many — collect the actual files now)

- `C:\AtomicRedTeam\atomics\T1543.003\bin\AtomicService.exe` — copy file, compute MD5/SHA1/SHA256, upload to sandbox/VT.
- `C:\Users\ADMINI~1\AppData\Local\Temp\2*` — copy entire folder (preserve timestamps).
- Records/exports of:
 - `sc qc AtomicTestService_CMD` and `sc queryex AtomicTestService_CMD`
 - `schtasks /query /tn "T1053_005_OnLogon" /v /fo LIST` and same for `T1053_005_OnStartup`
 - `net user art-test` and `net localgroup administrators`
- Sysmon/Wazuh raw logs for the 8 events (JSON export).
- Parent `cmd.exe` process and any running `AtomicService.exe` process memory dumps (if running) — create process dumps.

n/b : **Observations / patterns:**

- All account creation & escalation commands executed from `Temp` folder — suspicious staging.
- `art-test` account appears consistently and is elevated to Administrators.
- Scheduled tasks & service created for persistence (classic T1053/T1543 sequence).
- First **suspicious activity** begins at `20:59:32.250Z` (net1 user add).
- All actions executed by **Administrator**, terminal session `2`.
- Hashes and executable paths can be used as IOCs (check VirusTotal or sandbox).

1) What you *already* have (from the 8 hits)

These are confirmed and taken from your logs / exports:

- **Account IOC:** `art-test` (new local account).

- **Password in log:** Password123! (cleartext in command-line).
- **Scheduled task IOCs:** T1053_005_OnLogon, T1053_005_OnStartup.
- **Service IOC:** AtomicTestService_CMD.
- **Suspicious binary path:**
C:\AtomicRedTeam\atomics\T1543.003\bin\AtomicService.exe plus its SHA256 (you wrote this hash earlier).
- **Staging folder:** C:\Users\ADMINI~1\AppData\Local\Temp\2\.
- **Host:** EC2AMAZ-IBM5S70 (10.0.1.11).
- **Sysmon/Wazuh event IDs and rule IDs** for each hit (you exported JSON/CSV of the 8 events).
- **Process parents, PIDs, logonId/terminalSessionId** (you captured parentProcessId, parentUser etc.).

Conclusion: you have the core IOCs and the process-level evidence for a persistence chain (account creation → admin add → scheduled tasks → service). Good.

Scheduled task :

```
data.win.eventdata.schtasks /create /tn "T1053_005_OnStartup" /sc onstart /ru system /tr
commandLine      "\"cmd.exe /c calc.exe\""
```

POC

Endpoints | EC2AMAZ-IBM5S70

Account Discovery

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
> Sep 3, 2024 @ 23:59:46.301	T1087 T1059.003	Discovery: Execution	3	92032	Suspicious Windows cmd shell execution
> Sep 3, 2024 @ 23:59:46.254	T1087 T1059.003	Discovery: Execution	3	92032	Suspicious Windows cmd shell execution

Table JSON Rule

```

@timestamp      2024-09-03T20:59:46.254Z
_id             b1WnZEBByCksTPfVie_
agent.id       002
agent.ip       10.0.1.11
agent.name     EC2AMAZ-IBM5S70
data.win.eventdata.commandLine sc.exe create AtomicTestService_CMD binPath= C:\AtomicRedTeam\atomic\T1543.003\bin\AtomicService.exe
data.win.eventdata.company Microsoft Corporation
data.win.eventdata.currentDirectory C:\Users\ADMINI~1\AppData\Local\Temp\2\
data.win.eventdata.description Service Control Manager Configuration Tool
data.win.eventdata.fileVersion 10.0.20348.1 (WinBuild.160101.0800)
data.win.eventdata.hashes MD5=5F6B10CD439B40D92935F8F6A0C99670A, SHA256=2BF663EA493CDC21AD33AE8D8DA40CC5D2AFA55E24F9 E1BBF3D73E99DCADF693, IMPHASH=803254E010814E6994705A2725B2AFD
data.win.eventdata.image C:\Windows\System32\sc.exe
data.win.eventdata.integrityLevel High

```

New release is available! Go to the API configuration page for details

Endpoints | EC2AMAZ-IBM5S70

Account Discovery

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
23:59:32.756					initiated

Table JSON Rule

```

@timestamp      2024-09-03T20:59:32.756Z
_id             U1WnZEBByCksTPfVie_
agent.id       002
agent.ip       10.0.1.11
agent.name     EC2AMAZ-IBM5S70
data.win.eventdata.commandLine C:\Windows\system32\net1 user art-test /addne
data.win.eventdata.company Microsoft Corporation
data.win.eventdata.currentDirectory C:\Users\ADMINI~1\AppData\Local\Temp\2\
data.win.eventdata.description Net Command
data.win.eventdata.fileVersion 10.0.20348.469 (WinBuild.160101.0800)
data.win.eventdata.hashes MD5=36EC62D75CB11C6C6D166995C9662D5, SHA256=CB320DFCD6B635BD13AD840FD271E134CC53183394878 94FA90E7101195FAE23, IMPHASH=76EE66A0F294EAB8DCAEF5E64FB02F
data.win.eventdata.image C:\Windows\System32\Net1.exe
data.win.eventdata.integrityLevel High
data.win.eventdata.logonGuid {14eba091-7432-66d7-ea88-140000000000}
data.win.eventdata.logonId 0x1480ea
data.win.eventdata.originalFileName net1.exe
data.win.eventdata.parentCom net_user.art-test/addne

```

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Endpoints | EC2AMAZ-IBM5S70

Account Discovery

Technique details

ID T1087

Tactics Discovery

Version 2.4

Recent events 8 hits

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
> Sep 3, 2024 @ 23:59:46.301	T1087 T1059.003	Discovery: Execution	3	92032	Suspicious Windows cmd shell execution
> Sep 3, 2024 @ 23:59:46.254	T1087 T1059.003	Discovery: Execution	3	92032	Suspicious Windows cmd shell execution
> Sep 3, 2024 @ 23:59:43.927	T1087 T1059.003	Discovery: Execution	3	92032	Suspicious Windows cmd shell execution
> Sep 3, 2024 @ 23:59:43.896	T1087 T1059.003	Discovery: Execution	3	92032	Suspicious Windows cmd shell execution
> Sep 3, 2024 @ 23:59:32.811	T1087	Discovery	3	92031	Discovery activity executed
> Sep 3, 2024 @ 23:59:32.756	T1087	Discovery	3	92039	A net.exe account discovery command was

Search DQL May 1, 2024 @ 00:32:55.103 ... Dec 1, 2025 @ 00:33:07.836 Refresh

NOT data.win.eventdata.currentDirectory: C:\Program Files (x86)\iossec-agent\ x data.win.eventdata.parentUser: EC2AMAZ-IBM5S70\Administrator x data.win.eventdata.user: EC2AMAZ-IBM5S70\Administrator x + Add filter

New release is available! Go to the API configuration page for details

Endpoints EC2AMAZ-IBM5S7O

Account Discovery

Recent events (8 hits)

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 3, 2024 @ 23:59:40.301	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:46.254	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:43.927	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:43.896	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:32.811	T1087	Discovery	3	92031	Discovery activity executed
Sep 3, 2024 @ 23:59:32.770	T1087	Discovery	3	92039	A net.exe account discovery command was initiated
Sep 3, 2024 @ 23:59:32.756	T1087	Discovery	3	92039	A net.exe account discovery command was initiated
Sep 3, 2024 @ 23:40:52.928	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution

Events count evolution

Count

Time period: May 1, 2024 @ 16:50:12.792 - Dec 1, 2025 @ 16:50:30.459

Rows per page: 10

Endpoints EC2AMAZ-IBM5S7O

Account Discovery

Sep 3, 2024 @ 23:59:46.254	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:43.927	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution

Table JSON Rule

@timestamp	2024-09-03T20:59:43.927Z
_id	bVWwzEByCksiTPTtifik
agent.id	002
agent.ip	10.0.1.11
agent.name	EC2AMAZ-IBM5S7O
data.win.eventdata.commandLine	schtasks /create /tn 'T1053_005_OnStartup' /sc onstart /ru system /tr 'cmd.exe /c calc.exe' /ne
data.win.eventdata.company	Microsoft Corporation
data.win.eventdata.currentDirectory	C:\Users\ADMINI~1\AppData\Local\Temp\2\
data.win.eventdata.description	Task Scheduler Configuration Tool
data.win.eventdataFileVersion	10.0.20348.1 (WinBuild.160101.0800)
data.win.eventdata.hashes	MD5=ASC613AE2541EE5FFB83E2882DC148C2, SHA256=7AFCCR3C671A6142996A2F6BE94D533D000D943A8BA22, SHA3=93851A4232B76FA29AD, IMPHASH=44E70F20C235C150D75P6FC881E29CD1
data.win.eventdata.image	C:\Windows\System32\schtasks.exe
data.win.eventdata.integrityLevel	High
data.win.eventdata.logonGuid	{14eba091-7432-66d7-ea88-140000000000}
data.win.eventdata.logonId	0x1480ea

Endpoints EC2AMAZ-IBM5S7O

Account Discovery

Sep 3, 2024 @ 23:59:32.770	T1087	Discovery	3	92039	A net.exe account discovery command was initiated
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Table JSON Rule

@timestamp	2024-09-03T20:59:32.770Z
_id	VWWwzEByCksiTPTtifik
agent.id	002
agent.ip	10.0.1.11
agent.name	EC2AMAZ-IBM5S7O
data.win.eventdata.commandLine	C:\Windows\system32\net1 user art-test Password123!
data.win.eventdata.company	Microsoft Corporation
data.win.eventdata.currentDirectory	C:\Users\ADMINI~1\AppData\Local\Temp\2\
data.win.eventdata.description	Net Command
data.win.eventdataFileVersion	10.0.20348.469 (WinBuild.160101.0800)
data.win.eventdata.hashes	MD5=36EC62D75C7B1C6C6D166995C9662DD5, SHA256=CB320DFCD6B635BD13AD840FD271E134CC53183394878, SHA3=94FA90E7101195FAE23, IMPHASH=76EE66A0F294EB08DCAEF5E64FBF02F
data.win.eventdata.image	C:\Windows\System32\net1.exe
data.win.eventdata.integrityLevel	High
data.win.eventdata.logonGuid	{14eba091-7432-66d7-ea88-140000000000}
data.win.eventdata.logonId	0x1480ea
data.win.eventdata.originalFileName	net1.exe

New release is available! Go to the API configuration page for details

B : Privilege escalation

73 hits

1. Valid Accounts

Technique details
ID

[T1078](#)

Tactics

Persistence

[Privilege Escalation](#)

[Defense Evasion](#)

[Initial Access](#)

VersioN 2.6

LOGONTYPE : 5 -70HITS - **Logon Type 5** specifically means:

“Service logon” – a Windows service started successfully under a certain account context (usually **SYSTEM**).

-

The **subjectUserName** and **targetUserName** here are both **SYSTEM**, with:

- **processName**: C:\Windows\System32\services.exe
- **authenticationPackageName**: Negotiate
- **logonProcessName**: Advapi

That's a **local system service starting**, not a human login, not RDP, not remote access.

So:

- ✓ Legitimate – these are expected background logons for Windows services (services.exe starting a system process).
- ✗ Not necessarily linked to attacker activity by themselves.

Summary Report — MITRE ATT&CK Technique: Valid Accounts (T1078)

Technique ID: T1078

Tactics: Defense Evasion, Persistence, Privilege Escalation, Initial Access

Number of Events: 73

Relevant Event ID: 4624 (Successful Logon)

Overview

During analysis of authentication activity on host **EC2AMAZ-IBM5S7O (10.0.1.11)**, 73 logon success events (Event ID 4624) were identified and mapped to the MITRE technique **T1078 – Valid Accounts**. These events represent successful account authentications that could potentially indicate the use of legitimate credentials by an attacker to gain or maintain access.

Findings

- **70 of 73 logons** were associated with the **SYSTEM account** using **Logon Type 5**, which represents **service logons**.
These are automatically generated when Windows services start and are considered **normal system behavior**.
- **3 logons** involved virtual service accounts:
 - **DWM-2** (Desktop Window Manager)
 - **UMFD-2** (Font Driver Host)
- These accounts were logged in by the **winlogon.exe** process using **Logon Type 2 (Interactive)** and the **Negotiate** authentication package.

Such accounts are **Windows-managed virtual accounts** used to support GUI and display services and are **not user-driven**.

- **No logons were detected** for interactive users such as **Administrator, art-test**, or any external network users (Logon Type 3 or 10).
No external source IPs or remote logon attempts were recorded in this dataset.
-

Analysis

The logon patterns observed align entirely with **expected operating system behavior**:

- **Logon Type 5** → Service start-ups (normal background processes).
- **Logon Type 2 (DWM/UMFD)** → GUI session creation.
- **Source Network Address: None** → Local authentications only.
- **Process Name: winlogon.exe / services.exe** → Core Windows components.

There are **no indicators of unauthorized credential use**, lateral movement, or remote authentication attempts in these events.

Thus, while automatically categorized under MITRE T1078, these detections are determined to be **false positives**.

Conclusion

The 73 detections associated with **Valid Accounts (T1078)** represent **legitimate Windows system logons** rather than malicious credential use.

No evidence of attacker use of valid or stolen credentials was identified in this dataset.

These events can be safely **excluded from the active threat timeline** and documented as **benign background activity**.

Recommendations

- Continue monitoring for Event ID **4624** with **Logon Types 3, 10, or 11** (network or remote interactive logons) for potential valid-account misuse.
- Maintain visibility on authentication events linked to **non-system accounts** or **external source IPs**.
- Implement alert tuning to reduce false positives for known system and virtual accounts (e.g., SYSTEM, DWM, UMFD).

The screenshot shows the Wazuh Endpoint Security interface. On the left, there's a sidebar with tabs: Threat Hunting, File Integrity Monitoring, Configuration Assessment, MITRE ATT&CK, and Malware Detection. The main area is titled "Valid Accounts". It displays a message: "An account was successfully logged on." followed by detailed logon information:

- Subject:** Security ID: S-1-5-18; Account Name: EC2AMAZ-IBM5S7OS; Account Domain: WORKGROUP; Logon ID: 0x9E7
- Logon Information:** Logon Type: 2; Restricted Admin Mode: -; Virtual Account: Yes; Elevated Token: No
- Impersonation Level:** Impersonation
- New Logon:** Security ID: S-1-5-90-0-2; Account Name: DWM-2; Account Domain: Window Manager; Logon ID: 0x13DE0C; Linked Logon ID: 0x13DE0B; Network Account Name: -; Network Account Domain: -; Logon GUID: {00000000-0000-0000-0000-000000000000}
- Process Information:** Process ID: 0x82c; Process Name: C:\Windows\System32\winlogon.exe
- Network Information:** Workstation Name: -; Source Network Address: -; Source Port: -
- Detailed Authentication Information:** Logon Process: Advapi; Authentication Package: Negotiate; Transited Services: -

This screenshot shows the same Wazuh interface but with a search filter applied to Event ID 4624. The results table lists ten logon events from September 4, 2024, at various times, all categorized under Technique(s) T1078 (Defense Evasion, Persistence, Privilege Escalation, Initial Access) and Rule ID 60106 (Windows logon success). The table includes columns for Time, Technique(s), Tactic(s), Level, Rule ID, and Description.

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 4, 2024 @ 00:40:40.346	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 4, 2024 @ 00:40:40.352	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 4, 2024 @ 00:40:37.924	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 4, 2024 @ 00:40:37.893	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 4, 2024 @ 00:40:37.862	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 4, 2024 @ 00:40:37.830	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 4, 2024 @ 00:40:37.799	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 4, 2024 @ 00:40:36.553	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 4, 2024 @ 00:38:40.580	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 4, 2024 @ 00:37:37.155	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.

I have not gotten much, will get back to it.

2. Domain Account - 3hits

I have gotten something on lateral movement and privilege escalation

These three logs (Event ID 4624) show **successful logons** to your EC2 Windows instance (**EC2AMAZ-IBM5S7O**) using the **Administrator account**.

All 3 logs have:

- **Source IP:** 197.237.16.55 (public IP — geolocated in Nairobi, Kenya)
- **Target user:** Administrator
- **Logon Type:**

- 3 → Network Logon (common for SMB/RDP connections)
- 10 → Remote Interactive (RDP session)
- **Authentication Package:** NTLM or Negotiate
- **Elevated Token:** Yes → indicates admin-level privileges
- **Process:** svchost.exe or NtLmSsp — system processes handling authentication
- **Workstation:** DESKTOP-003 (remote machine initiating the connection)

Table

From this, you can deduce several **key attack behaviors**:

MITRE Technique	Name	Evidence	Explanation
T1078.002	Valid Accounts: Domain Accounts	Logon by “Administrator” from remote source	Attacker used a valid privileged credential
T1021.001	Remote Desktop Protocol	Logon Type 10 (RDP)	Attacker connected via RDP
T1550.002	Pass-the-Hash	NTLM authentication (no password typed)	Indicates possible hash reuse attack
Privilege Escalation / Lateral Movement		Source workstation → EC2 server	The attacker moved into a critical system using admin creds

N/B : This strongly suggests the attacker already had **admin-level credentials** (stolen hash or reused password) and used RDP/NTLM to move laterally into this Windows host.

Part of it : **Privilege Escalation & Lateral Movement – Use of Valid Administrator Credentials (MITRE: T1078.002, T1021.001, T1550.002)- title.**

Report on this : On September 3, 2024, at approximately 20:40 UTC, multiple successful logons were observed on host EC2AMAZ-IBM5S7O (10.0.1.11) using the built-in Administrator account. The source IP address (197.237.16.55, geolocated in Nairobi, Kenya) initiated both network and RDP logons using NTLM authentication. The presence of elevated tokens and NTLM V2 authentication without interactive logon suggests a possible Pass-the-Hash attack using stolen credentials.

This activity aligns with MITRE ATT&CK techniques T1078.002 (Valid Accounts - Domain Accounts), T1021.001 (Remote Desktop Protocol), and T1550.002 (Pass-the-Hash). It represents privilege escalation and lateral movement, and may indicate the adversary has obtained valid administrator credentials or hashes.

POC:

```
JSON 1st of 3hits : {
  "agent": {
    "ip": "10.0.1.11",
    "name": "EC2AMAZ-IBM5S7O",
    "id": "002"
  },
  "manager": {
    "name": "wazuh.manager"
  }
}
```

```
},  
  "data": {  
    "win": {  
      "eventdata": {  
        "subjectLogonId": "0x3e7",  
        "restrictedAdminMode": "%%1843",  
        "subjectDomainName": "WORKGROUP",  
        "targetLinkedLogonId": "0x0",  
        "impersonationLevel": "%%1833",  
        "ipAddress": "197.237.16.55",  
        "authenticationPackageName": "Negotiate",  
        "workstationName": "EC2AMAZ-IBM5S70",  
        "targetLogonId": "0x1488ea",  
        "logonProcessName": "User32",  
        "logonGuid": "{00000000-0000-0000-0000-000000000000}",  
        "targetUserName": "Administrator",  
        "keyLength": "0",  
        "elevatedToken": "%%1842",  
        "subjectUserSid": "S-1-5-18",  
        "processId": "0x7e4",  
        "processName": "C:\\\\Windows\\\\System32\\\\svchost.exe",  
        "ipPort": "0",  
        "targetDomainName": "EC2AMAZ-IBM5S70",  
        "targetUserSid": "S-1-5-21-1355279879-2134190647-2577363000-500",  
        "virtualAccount": "%%1843",  
        "logonType": "10",  
        "subjectUserName": "EC2AMAZ-IBM5S70$"  
      },  
      "system": {  
        "eventID": "4624",  
        "keywords": "0x8020000000000000",  
        "providerGuid": "{54849625-5478-4994-a5ba-3e3b0328c30d}",  
        "level": "0",  
        "category": "4",  
        "sourceName": "Security",  
        "logonType": "10",  
        "logonId": "0x3e7",  
        "restrictedAdminMode": "%%1843",  
        "subjectDomainName": "WORKGROUP",  
        "targetDomainName": "EC2AMAZ-IBM5S70",  
        "targetUserSid": "S-1-5-21-1355279879-2134190647-2577363000-500",  
        "virtualAccount": "%%1843",  
        "processName": "C:\\\\Windows\\\\System32\\\\svchost.exe",  
        "processId": "0x7e4",  
        "ipPort": "0",  
        "ipAddress": "197.237.16.55",  
        "logonProcessName": "User32",  
        "logonGuid": "{00000000-0000-0000-0000-000000000000}",  
        "targetUserName": "Administrator",  
        "keyLength": "0",  
        "elevatedToken": "%%1842",  
        "subjectUserName": "EC2AMAZ-IBM5S70$"  
      }  
    }  
  }  
}
```

"channel": "Security",
"opcode": "0",
"message": "\r\n\r\nSubject:\r\n\r\ntSecurity
ID:\t\tS-1-5-18\r\n\tAccount Name:\t\tEC2AMAZ-IBM5S70\$\r\n\tAccount
Domain:\t\tWORKGROUP\r\n\tLogon ID:\t\t0x3E7\r\n\tLogon
Information:\r\n\tLogon Type:\t\t10\r\n\tRestricted Admin Mode:\tNo\r\n\tVirtual
Account:\t\tNo\r\n\tElevated Token:\tYes\r\n\tImpersonation
Level:\t\tImpersonation\r\n\tNew Logon:\r\n\tSecurity
ID:\t\tS-1-5-21-1355279879-2134190647-2577363000-500\r\n\tAccount
Name:\t\tAdministrator\r\n\tAccount Domain:\t\tEC2AMAZ-IBM5S70\r\n\tLogon
ID:\t\t0x1488EA\r\n\tLinked Logon ID:\t\t0x0\r\n\tNetwork Account
Name:\t-\r\n\tNetwork Account Domain:\t-\r\n\tLogon
GUID:\t\t{00000000-0000-0000-0000-000000000000}\r\n\tProcess
Information:\r\n\tProcess ID:\t\t0x7e4\r\n\tProcess
Name:\t\tC:\\Windows\\System32\\svchost.exe\r\n\tNetwork
Information:\r\n\tWorkstation Name:\tEC2AMAZ-IBM5S70\r\n\tSource Network
Address:\t197.237.16.55\r\n\tSource Port:\t\t0\r\n\tDetailed Authentication
Information:\r\n\tLogon Process:\t\tUser32\r\n\tAuthentication
Package:\t\tNegotiate\r\n\tTransited Services:\t\tPackage Name (NTLM
only):\t\tKey Length:\t\t0\r\n\tThis event is generated when a logon session is
created. It is generated on the computer that was accessed.\r\n\tThe subject fields
indicate the account on the local system which requested the logon. This is most
commonly a service such as the Server service, or a local process such as Winlogon.exe
or Services.exe.\r\n\tThe logon type field indicates the kind of logon that occurred.
The most common types are 2 (interactive) and 3 (network).\r\n\tThe New Logon
fields indicate the account for whom the new logon was created, i.e. the account that
was logged on.\r\n\tThe network fields indicate where a remote logon request
originated. Workstation name is not always available and may be left blank in some
cases.\r\n\tThe impersonation level field indicates the extent to which a process in
the logon session can impersonate.\r\n\tThe authentication information fields
provide detailed information about this specific logon request.\r\n\t- Logon GUID is a
unique identifier that can be used to correlate this event with a KDC event.\r\n\t-
Transited services indicate which intermediate services have participated in this logon
request.\r\n\t- Package name indicates which sub-protocol was used among the NTLM
protocols.\r\n\t- Key length indicates the length of the generated session key. This will
be 0 if no session key was requested.\r\n",
"version": "2",
"systemTime": "2024-09-03T20:40:18.8640643Z",
"eventRecordID": "208176",
"threadID": "1824",
"computer": "EC2AMAZ-IBM5S70",
"task": "12544",
"processID": "856",
"severityValue": "AUDIT_SUCCESS",
"providerName": "Microsoft-Windows-Security-Auditing"
}
},
},

```
"rule": {  
    "firedtimes": 1,  
    "mail": false,  
    "level": 3,  
    "description": "User: WORKGROUP\\Administrator logged using Remote Desktop Connection (RDP) from ip:197.237.16.55.",  
    "groups": [  
        "win_evt_channel",  
        "windows"  
    ],  
    "mitre": {  
        "technique": [  
            "Remote Desktop Protocol",  
            "Domain Accounts"  
        ],  
        "id": [  
            "T1021.001",  
            "T1078.002"  
        ],  
        "tactic": [  
            "Lateral Movement",  
            "Defense Evasion",  
            "Persistence",  
            "Privilege Escalation",  
            "Initial Access"  
        ]  
    },  
    "id": "92653"  
},  
    "decoder": {  
        "name": "windows_eventchannel"  
    },  
    "full_log":  
    "{\"win\":{\"system\":{\"providerName\":\"Microsoft-Windows-Security-Auditing\"}},\"provi
```

derGuid\" : "\{54849625-5478-4994-a5ba-3e3b0328c30d\}\", \"eventID\" : \"4624\", \"version\" : \"2\", \"level\" : \"0\", \"task\" : \"12544\", \"opcode\" : \"0\", \"keywords\" : \"0x8020000000000000\", \"systemTime\" : \"2024-09-03T20:40:18.8640643Z\", \"eventRecordID\" : \"208176\", \"processID\" : \"856\", \"threadID\" : \"1824\", \"channel\" : \"Security\", \"computer\" : \"EC2A MAZ-IBM5S70\", \"severityValue\" : \"AUDIT_SUCCESS\", \"message\" : \"\\\"An account was successfully logged on.\\r\\n\\r\\nSubject:\\r\\n\\tSecurity ID:\\t\\tS-1-5-18\\r\\n\\tAccount Name:\\t\\tEC2AMAZ-IBM5S70\$\\r\\n\\tAccount Domain:\\t\\tWORKGROUP\\r\\n\\tLogon ID:\\t\\t0x3E7\\r\\n\\r\\nLogon Information:\\r\\n\\tLogon Type:\\t\\t10\\r\\n\\tRestricted Admin Mode:\\t\\tNo\\r\\n\\tVirtual Account:\\t\\tNo\\r\\n\\tElevated Token:\\t\\tYes\\r\\n\\r\\nImpersonation Level:\\t\\tImpersonation\\r\\n\\r\\nNew Logon:\\r\\n\\tSecurity ID:\\t\\tS-1-5-21-1355279879-2134190647-2577363000-500\\r\\n\\tAccount Name:\\t\\tAdministrator\\r\\n\\tAccount Domain:\\t\\tEC2AMAZ-IBM5S70\\r\\n\\tLogon ID:\\t\\t0x1488EA\\r\\n\\tLinked Logon ID:\\t\\t0x0\\r\\n\\tNetwork Account Name:\\t\\r\\n\\tNetwork Account Domain:\\t\\r\\n\\tLogon GUID:\\t\\t{00000000-0000-0000-0000-000000000000}\\r\\n\\r\\nProcess Information:\\r\\n\\tProcess ID:\\t\\t0x7e4\\r\\n\\tProcess Name:\\t\\tC:\\\\\\Windows\\\\\\System32\\\\svchost.exe\\r\\n\\r\\nNetwork Information:\\r\\n\\tWorkstation Name:\\t\\tEC2AMAZ-IBM5S70\\r\\n\\tSource Network Address:\\t197.237.16.55\\r\\n\\tSource Port:\\t\\t0\\r\\n\\r\\nDetailed Authentication Information:\\r\\n\\tLogon Process:\\t\\tUser32\\r\\n\\tAuthentication Package:\\tNegotiate\\r\\n\\tTransited Services:\\t\\r\\n\\tPackage Name (NTLM only):\\t\\r\\n\\r\\nKey Length:\\t\\t0\\r\\n\\r\\nThis event is generated when a logon session is created. It is generated on the computer that was accessed.\\r\\n\\r\\nThe subject fields indicate the account on the local system which requested the logon. This is most commonly a service such as the Server service, or a local process such as Winlogon.exe or Services.exe.\\r\\n\\r\\nThe logon type field indicates the kind of logon that occurred. The most common types are 2 (interactive) and 3 (network).\\r\\n\\r\\nThe New Logon fields indicate the account for whom the new logon was created, i.e. the account that was logged on.\\r\\n\\r\\nThe network fields indicate where a remote logon request originated. Workstation name is not always available and may be left blank in some cases.\\r\\n\\r\\nThe impersonation level field indicates the extent to which a process in the logon session can impersonate.\\r\\n\\r\\nThe authentication information fields provide detailed information about this specific logon request.\\r\\n\\t- Logon GUID is a unique identifier that can be used to correlate this event with a KDC event.\\r\\n\\t- Transited services indicate which intermediate services have participated in this logon request.\\r\\n\\t- Package name indicates which sub-protocol was used among the NTLM protocols.\\r\\n\\t- Key length indicates the length of the generated session key. This will be 0 if no session key was requested.\\\"}, \"eventdata\" : {\"subjectUserId\" : \"S-1-5-18\", \"subjectUserName\" : \"EC2AMAZ-IBM5S70\$\", \"subjectDomainName\" : \"WORKGROUP\", \"subjectLogonId\" : \"0x3e7\", \"targetUserId\" : \"S-1-5-21-1355279879-2134190647-2577363000-500\", \"targetUserName\" : \"Administrator\", \"targetDomainName\" : \"EC2AMAZ-IBM5S70\", \"targetLogonId\" : \"0x1488ea\", \"logonType\" : \"10\", \"logonProcessName\" : \"User32\", \"authenticationPackageName\" : \"Negotiate\", \"workstationName\" : \"EC2AMAZ-IBM5S70\", \"logonGuid\" : \"{00000000-0000-0000-0000-000000000000}\", \"keyLength\" : \"0\", \"processId\" : \"0x7e4\", \"processName\" : \"C:\\\\\\\\\\\\\\Windows\\\\\\\\\\\\\\\\System32\\\\\\\\\\\\\\\\svchost.exe\", \"ipAddress\" : \"197.237.16.55\", \"ipPort\" : \"0\", \"impersonationLevel\" : \"%1833\", \"restrictedAdminMode\" : \"%1843\", \"virtualAccount\" : \"%1843\", \"targetLinkedLogonId\" : \"0x0\", \"elevatedToken\" : \"%1842\"}}},

 "input": {

 "type": "log"

 },

```
"@timestamp": "2024-09-03T20:40:19.804Z",
"location": "EventChannel",
"id": "1725396019.3259527",
"GeoLocation": {
  "city_name": "Nairobi",
  "country_name": "Kenya",
  "region_name": "Nairobi Province",
  "location": {
    "lon": 36.8155,
    "lat": -1.2841
  }
},
"timestamp": "2024-09-03T20:40:19.804+0000",
"_id": "q1WduZEByCKsiTPT8CYu"
}
```

2hit or 3hits : 3/3 JSON :{

```
"agent": {
  "ip": "10.0.1.11",
  "name": "EC2AMAZ-IBM5S7O",
  "id": "002"
},
"manager": {
  "name": "wazuh.manager"
},
"data": {
  "win": {
    "eventdata": {
      "subjectLogonId": "0x0",
      "targetLinkedLogonId": "0x0",
      "impersonationLevel": "%>1833",
      "ipAddress": "197.237.16.55",
      "authenticationPackageName": "NTLM",
      "workstationName": "DESKTOP-003",
      "processName": "System"
    }
  }
}
```

```
"ImPackageName": "NTLM V2",
"targetLogonId": "0x13bbcc",
"logonProcessName": "NtLmSsp",
"logonGuid": "{00000000-0000-0000-0000-000000000000}",
"targetUserName": "Administrator",
"keyLength": "128",
"elevatedToken": "%%1842",
"subjectUserSid": "S-1-0-0",
"processId": "0x0",
"ipPort": "0",
"targetDomainName": "EC2AMAZ-IBM5S70",
"targetUserSid": "S-1-5-21-1355279879-2134190647-2577363000-500",
"virtualAccount": "%%1843",
"logonType": "3"
},
"system": {
"eventID": "4624",
"keywords": "0x8020000000000000",
"providerGuid": "{54849625-5478-4994-a5ba-3e3b0328c30d}",
"level": "0",
"channel": "Security",
"opcode": "0",
"message": "\"An account was successfully logged on.\r\n\r\nSubject:\r\n\r\ntSecurity ID:\t\tS-1-0-0\r\n\r\n\tAccount Name:\t\t-\r\n\t\tAccount Domain:\t\t-\r\n\t\tLogon ID:\t\t0x0\r\n\t\tLogon Information:\r\n\t\tLogon Type:\t\t3\r\n\t\tRestricted Admin Mode:\t\t-\r\n\t\tVirtual Account:\t\tNo\r\n\t\tElevated Token:\t\tYes\r\n\t\tImpersonation Level:\t\tImpersonation\r\n\t\tNew Logon:\r\n\t\tSecurity ID:\t\tS-1-5-21-1355279879-2134190647-2577363000-500\r\n\t\tAccount Name:\t\tAdministrator\r\n\t\tAccount Domain:\t\tEC2AMAZ-IBM5S70\r\n\t\tLogon ID:\t\t0x13BBCC\r\n\t\tLinked Logon ID:\t\t0x0\r\n\t\tNetwork Account Name:\t\t-\r\n\t\tNetwork Account Domain:\t\t-\r\n\t\tLogon GUID:\t\t{00000000-0000-0000-0000-000000000000}\r\n\t\tProcess Information:\r\n\t\t\tProcess ID:\t\t0x0\r\n\t\t\tProcess Name:\t\t-\r\n\t\t\tNetwork Information:\r\n\t\t\tWorkstation Name:\t\tDESKTOP-003\r\n\t\t\tSource Network Address:\t\t197.237.16.55\r\n\t\t\tSource Port:\t\t0\r\n\t\t\tDetailed Authentication Information:\r\n\t\t\tLogon Process:\t\tNtLmSsp \r\n\t\t\tAuthentication Package:\t\tNTLM\r\n\t\t\tTransited Services:\t\t-\r\n\t\t\tPackage Name (NTLM only):\t\tNTLM V2\r\n\t\t\tKey Length:\t\t128\r\n\t\t\tThis event is generated when a logon session is created. It is generated on the computer that was accessed.\r\n\t\t\tThe subject fields indicate the account on the local system which requested the logon. This is most commonly a service such as the Server service, or a local process such as Winlogon.exe"
}
```

or Services.exe.\r\n\r\nThe logon type field indicates the kind of logon that occurred. The most common types are 2 (interactive) and 3 (network).\r\n\r\nThe New Logon fields indicate the account for whom the new logon was created, i.e. the account that was logged on.\r\n\r\nThe network fields indicate where a remote logon request originated. Workstation name is not always available and may be left blank in some cases.\r\n\r\nThe impersonation level field indicates the extent to which a process in the logon session can impersonate.\r\n\r\nThe authentication information fields provide detailed information about this specific logon request.\r\n\r\n- Logon GUID is a unique identifier that can be used to correlate this event with a KDC event.\r\n\r\n- Transited services indicate which intermediate services have participated in this logon request.\r\n\r\n- Package name indicates which sub-protocol was used among the NTLM protocols.\r\n\r\n- Key length indicates the length of the generated session key. This will be 0 if no session key was requested.\r\n",

```
"version": "2",  
"systemTime": "2024-09-03T20:40:09.7714278Z",  
"eventRecordID": "208163",  
"threadID": "3864",  
"computer": "EC2AMAZ-IBM5S70",  
"task": "12544",  
"processID": "856",  
"severityValue": "AUDIT_SUCCESS",  
"providerName": "Microsoft-Windows-Security-Auditing"  
}  
}  
},  
"rule": {  
"mail": false,  
"level": 6,  
"pci_dss": [  
"10.2.5"  
],  
"hipaa": [  
"164.312.b"  
],  
"tsc": [  
"CC6.8",  
"CC7.2",  
"CC7.3"
```

],

"description": "Successful Remote Logon Detected - User:\\Administrator - NTLM authentication, possible pass-the-hash attack - Possible RDP connection. Verify that DESKTOP-003 is allowed to perform RDP connections",

"groups": [

 "win_evt_channel",

 "windows",

 "\n authentication_success",

 "\n "

],

"nist_800_53": [

 "AU.14",

 "AC.7"

],

"gdpr": [

 "IV_32.2"

],

"firedtimes": 2,

"mitre": {

 "technique": [

 "Pass the Hash",

 "Domain Accounts",

 "Remote Desktop Protocol"

],

 "id": [

 "T1550.002",

 "T1078.002",

 "T1021.001"

],

 "tactic": [

 "Defense Evasion",

 "Lateral Movement",

 "Persistence",

 "Privilege Escalation",

"Initial Access"]},
"id": "92657",
"gpg13": [
"7.1",
"7.2"
],
,
"decoder": {
"name": "windows_eventchannel"
,
"full_log":
"{"win\";{"system\": {"providerName": "Microsoft-Windows-Security-Auditing", "providerGuid": "{54849625-5478-4994-a5ba-3e3b0328c30d}", "eventID": "4624", "version": "2", "level": "0", "task": "12544", "opcode": "0", "keywords": "0x8020000000000000", "systemTime": "2024-09-03T20:40:09.7714278Z", "eventRecordID": "208163", "processID": "856", "threadID": "3864", "channel": "Security", "computer": "EC2AMAZ-IBM5S7O", "severityValue": "AUDIT_SUCCESS", "message": "\\\\"An account was successfully logged on.\r\n\r\nSubject:\r\n\r\n\tSecurity ID:\tS-1-0-0\r\n\tAccount Name:\tAccount\r\n\tLogon ID:\t0x0\r\n\tLogon Information:\r\n\tLogon Type:\t3\r\n\tRestricted Admin Mode:\tVirtual Account:\tNo\r\n\tElevated Token:\tYes\r\n\tImpersonation Level:\tImpersonation\r\n\tNew Logon:\r\n\tSecurity ID:\tS-1-5-21-1355279879-2134190647-2577363000-500\r\n\tAccount Name:\tAdministrator\r\n\tLogon ID:\t0x13BBCC\r\n\tLinked Logon ID:\t0x0\r\n\tNetwork Account Name:\tNetwork\r\n\tLogon Domain:\tLogon\r\n\tGUID:\t{00000000-0000-0000-0000-000000000000}\r\n\tProcess Information:\r\n\tProcess ID:\t0x0\r\n\tProcess Name:\tNetwork\r\n\tWorkstation Name:\tDESKTOP-003\r\n\tSource Network Address:\t197.237.16.55\r\n\tSource Port:\t0\r\n\tDetailed Authentication Information:\r\n\tLogon Process:\tNtLmSsp\r\n\tAuthentication Package:\tNTLM\r\n\tTransited Services:\tPackage Name (NTLM only):\tNTLM V2\r\n\tKey Length:\t128\r\n\tThis event is generated when a logon session is created. It is generated on the computer that was accessed.\r\n\tThe subject fields indicate the account on the local system which requested the logon. This is most commonly a service such as the Server service, or a local process such as Winlogon.exe or Services.exe.\r\n\tThe logon type field indicates the kind of logon that occurred. The most common types are 2 (interactive) and 3 (network).\r\n\tThe New Logon fields indicate the account for whom the new logon was created, i.e. the account that was logged on.\r\n\tThe network fields indicate where a remote logon request originated. Workstation name is not always available and may be left blank in some cases.\r\n\tThe impersonation level field indicates the extent to which a process in the logon session can impersonate.\r\n\tThe authentication information fields provide detailed

information about this specific logon request. \\r\\n\\t- Logon GUID is a unique identifier that can be used to correlate this event with a KDC event. \\r\\n\\t- Transited services indicate which intermediate services have participated in this logon request. \\r\\n\\t- Package name indicates which sub-protocol was used among the NTLM protocols. \\r\\n\\t- Key length indicates the length of the generated session key. This will be 0 if no session key was requested. \\\"},\\\"eventdata\\\":{\\\"subjectUserSid\\\":\\\"S-1-0-0\\\",\\\"subjectLogonId\\\":\\\"0x0\\\",\\\"targetUserSid\\\":\\\"S-1-5-21-1355279879-2134190647-2577363000-500\\\",\\\"targetUserName\\\":\\\"Administrator\\\",\\\"targetDomainName\\\":\\\"EC2AMAZ-IBM5S7O\\\",\\\"targetLogonId\\\":\\\"0x13bbcc\\\",\\\"logonType\\\":\\\"3\\\",\\\"logonProcessName\\\":\\\"NtLmSsp\\\",\\\"authenticationPackageName\\\":\\\"NTLM\\\",\\\"workstationName\\\":\\\"DESKTOP-003\\\",\\\"logonGuid\\\":\\\"{00000000-0000-0000-0000-000000000000}\\\",\\\"ImPackageName\\\":\\\"NTLM V2\\\",\\\"keyLength\\\":\\\"128\\\",\\\"processId\\\":\\\"0x0\\\",\\\"ipAddress\\\":\\\"197.237.16.55\\\",\\\"ipPort\\\":\\\"0\\\",\\\"impersonationLevel\\\":\\\"%1833\\\",\\\"virtualAccount\\\":\\\"%1843\\\",\\\"targetLinkedLogonId\\\":\\\"0x0\\\",\\\"elevatedToken\\\":\\\"%1842\\\"}}},

```
"input": {  
    "type": "log"  
},  
"@timestamp": "2024-09-03T20:40:10.787Z",  
"location": "EventChannel",  
"id": "1725396010.3222486",  
"GeoLocation": {  
    "city_name": "Nairobi",  
    "country_name": "Kenya",  
    "region_name": "Nairobi Province",  
    "location": {  
        "lon": 36.8155,  
        "lat": -1.2841  
    }  
},  
"timestamp": "2024-09-03T20:40:10.787+0000",  
"_id": "pIWduZEByCKsiTPT0Ca_"  
}
```

Poc

Not secure https://52.90.255.32/app/endpoints-summary#/overview/?tab=mitre&agentId=002

Details

ID	Name	Created Time	Modified Time	Version
T1021.001	Remote Desktop Protocol	Feb 11, 2020 @ 21:23:26.059	Mar 31, 2023 @ 00:01:41.927	1.1

Description

Adversaries may use [Valid Accounts](#) to log into a computer using the Remote Desktop Protocol (RDP). The adversary may then perform actions as the logged-on user.

Remote desktop is a common feature in operating systems. It allows a user to log into an interactive session with a system desktop graphical user interface on a remote system. Microsoft refers to its implementation of the Remote Desktop Protocol (RDP) as Remote Desktop Services (RDS). (Citation: TechNet Remote Desktop Services)

Adversaries may connect to a remote system over RDP/RDS to expand access if the service is enabled and allows access to accounts with known credentials. Adversaries will likely use Credential Access techniques to acquire credentials to use with RDP. Adversaries may also use RDP in conjunction with the [Accessibility Features](#) or [Terminal Services DLL](#) for Persistence. (Citation: Alperovitch Malware)

Groups

ID	Name	Description
G0045	menuPass	menuPass is a threat group that has been active since at least 2006. Individual members of menuPass are known to have acted in association with the Chinese Ministry of State Security's (MSS) Tianjin State Security Bureau and worked for the Huaying Hailai Science and Technology Development Company. (Citation: DOJ APT10 Dec 2018) (Citation: District Court of NY APT10 Indictment December 2018)
G0088	TEMP.Veles	TEMP.Veles is a Russia-based threat group that has targeted critical infrastructure. The group has been observed utilizing TRITON, a malware framework designed to manipulate industrial safety systems. (Citation: FireEye TRITON 2019) (Citation: FireEye TEMP.Veles 2018) (Citation: FireEye TEMP.Veles JSON April 2019)
G0102	Wizard Spider	Wizard Spider is a Russia-based financially motivated threat group originally known for the creation and deployment of TrickBot since at least 2016. Wizard Spider possesses a diverse arsenal of tools and has conducted ransomware campaigns against a variety of organizations, ranging from major corporations to hospitals. (Citation: CrowdStrike Ryuk January 2019) (Citation: DHS/CISA Ransomware Targeting Healthcare October 2020) (Citation: CrowdStrike Wizard Spider October 2020)
G0099	Silence	Silence is a financially motivated threat actor targeting financial institutions in different countries. The group was first seen in

Not secure https://52.90.255.32/app/endpoints-summary#/agents?tab>Welcome&agent=002&tabView=panels&_g=[filters:(),refreshInterval:(pause...)

Domain Accounts

Tactics

- Persistence
- Privilege Escalation
- Defense Evasion
- Initial Access

Version

1.3

Recent events

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 3, 2024 @ 23:40:19.804	T1021.001 T1078.002	Lateral Movement, Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	92653	User WORKGROUP\Administrator logged using Remote Desktop Connection (RDP) from ip:197.237.16.55.
Sep 3, 2024 @ 23:40:10.767	T1550.002 T1078.002 T1021.001	Defense Evasion, Lateral Movement, Persistence, Privilege Escalation, Initial Access	6	92657	Successful Remote Logon Detected - User\Administrator - NTLM authentication, possible pass-the-hash attack - Possible RDP connection. Verify that DESKTOP-003 is allowed to perform RDP connections
Sep 3, 2024 @ 23:40:08.066	T1550.002 T1078.002 T1021.001	Defense Evasion, Lateral Movement, Persistence, Privilege Escalation, Initial Access	6	92657	Successful Remote Logon Detected - User\Administrator - NTLM authentication, possible pass-the-hash attack - Possible RDP connection. Verify that DESKTOP-003 is allowed to perform RDP connections

Rows per page: 10 < 1 >

Not secure https://52.90.255.32/app/endpoints-summary#/agents?tab>Welcome&agent=002&tabView=panels&_g=[filters:(),refreshInterval:(pause...)

Domain Accounts

data.win.system.message

An account was successfully logged on.

Subject:

- Security ID: S-1-0-0
- Account Name: -
- Account Domain: -
- Logon ID: 0x0

Logon Information:

- Logon Type: 3
- Restricted Admin Mode: -
- Virtual Account: No
- Elevated Token: Yes

Impersonation Level: Impersonation

New Logon:

- Security ID: S-1-5-21-1355279879-2134190647-2577363000-500
- Account Name: Administrator
- Account Domain: EC2AMAZ-IBM5ST0
- Logon ID: 0x13BCC
- Linked Logon ID: 0x0
- Network Account Name: -
- Network Account Domain: -
- Logon GUID: {00000000-0000-0000-0000-000000000000}

Process Information:

- Process ID: 0x0
- Process Name: -

Network Information:

- Workstation Name: DESKTOP-003
- Source Network Address: 197.237.16.55
- Source Port: 0

Detailed Authentication Information:

- Logon Process: NTlmssp
- Authentication Package: NTLM
- Transited Services: -
- Package Name (NTLM only): NTLM V2

Not secure https://52.90.255.32/app/endpoints-summary#/agents?tab=welcome&agent=002&tabView=panels&_g=[filters:(),refreshInterval:(),pause...]

Domain Accounts

ID: 002 Status: disconnected IP address: 10.0.1.11 Version: Wazuh v4.8.2

MITRE ATT&CK Compliance

Events count evolution

Subject: Security ID: S-1-5-18 Account Name: EC2AMAZ-IBM5S7O Account Domain: WORKGROUP Logon ID: 0x3E7

Logon Information: Logon Type: 10 Restricted Admin Mode: No Virtual Account: No Elevated Token: Yes

Impersonation Level: Impersonation

New Logon: Security ID: S-1-5-21-135527987-2134190647-2577363000-500 Account Name: Administrator Account Domain: EC2AMAZ-IBM5S7O Logon ID: 0x148BEA Linked Logon ID: 0x0 Network Account Name: - Network Account Domain: - Logon GUID: {00000000-0000-0000-0000-000000000000}

Process Information: Process ID: 0x7e4 Process Name: C:\Windows\System32\svchost.exe

Network Information: Workstation Name: EC2AMAZ-IBM5S7O Source Network Address: 197.237.16.55 Source Port: 0

Detailed Authentication Information: Logon Process: User32 Authentication Package: Negotiate Translated Services: Preferred Name: ANONYMOUSLOGON

Not secure https://13.221.124.16/app/endpoints-summary#/agents?tab=welcome&agent=002&tabView=panels&_g=[filters:(),refreshInterval:(),pause...]

EC2AMAZ-IBM5S7O (002)

Threat Hunting File Integrity Monitoring Configuration Assessment MITRE ATT&CK Malware Detection More... ▾

ID: 002 Status: disconnected IP address: 10.0.1.11 Version: Wazuh v4.8.2 Groups: default Operating system: Microsoft Windows Server ... Cluster node: node01 Registration date: Sep 2, 2024 @ 23:49:57.000 Last keep alive: Sep 4, 2024 @ 00:41:26.000

May 1, 2024 @ 00:32:55.000 to Dec 1, 2025 @ 00:33:07.000

MITRE ATT&CK Top Tactics Command and Control Defense Evasion Persistence Privilege Escalation Discovery

Compliance PCI DSS 2.2 (344) 10.2.5 (89) 11.5 (57) 2.2.5 (50) 4.1 (41)

FIM: Recent events

Time	Path	Action	Rule description	Rule Le...	Rule Id
Sep 3, 2024 @ 23:59:40.619	c:\programdata\microsoftwindo...	added	File added to the system.	5	554
Sep 3, 2024 @ 11:53:55.846	HKEY_LOCAL_MACHINE\syste...	modified	Registry Key Integrity Checksum C...	5	594
Sep 3, 2024 @ 11:53:54.631	HKEY_LOCAL_MACHINE\syste...	modified	Registry Value Integrity Checksum...	5	750
Sep 3, 2024 @ 11:53:54.616	HKEY_LOCAL_MACHINE\syste...	modified	Registry Value Integrity Checksum...	5	750
Sep 3, 2024 @ 11:53:54.610	HKEY_LOCAL_MACHINE\syste...	modified	Registry Value Integrity Checksum...	5	750

Events count evolution

SCA: Lastest scans CIS Microsoft Windows Server 2022 Benchmark v1.0.0

Policy	End scan	Passed	Failed	Not applic...	Score
CIS Microsoft Windows Server 2022 Benchmark v1.0.0	Sep 4, 2024 @ 00:39:20.000	121	217	4	35%

New release is available! Go to the API configuration page for details

Disable updates notifications Dismiss

Not secure https://52.90.255.32/app/endpoints-summary#/overview?tab=mitre&agentId=002

Details

Search in all resources Groups (150)

ID: T1078.002 Name: Domain Accounts Created Time: Mar 13, 2020 @ 23:21:54.758 Modified Time: Apr 13, 2023 @ 20:17:03.605 Version: 1.3

Description: Adversaries may obtain and abuse credentials of a domain account as a means of gaining Initial Access, Persistence, Privilege Escalation, or Defense Evasion.(Citation: TechNet Credential Theft) Domain accounts are those managed by Active Directory Domain Services where access and permissions are configured across systems and services that are part of that domain. Domain accounts can cover users, administrators, and services.(Citation: Microsoft AD Accounts)

Adversaries may compromise domain accounts, some with a high level of privileges, through various means such as [OS Credential Dumping](#) or password reuse, allowing access to privileged resources of the domain.

Groups

ID	Name	Description
G0102	Wizard Spider	Wizard Spider is a Russia-based financially motivated threat group originally known for the creation and deployment of TrickBot since at least 2016. Wizard Spider possesses a diverse arsenal of tools and has conducted ransomware campaigns against a variety of organizations, ranging from major corporations to hospitals.(Citation: CrowdStrike Ryuk January 2019)(Citation: DHS/CISA Ransomware Targeting Healthcare October 2020)(Citation: CrowdStrike Wizard Spider October 2020)
G0028	Threat Group-1314	Threat Group-1314 is an unattributed threat group that has used compromised credentials to log into a victim's remote access infrastructure. (Citation: Dell TG-1314)
G0092	TA505	TA505 is a cyber criminal group that has been active since at least 2014. TA505 is known for frequently changing malware, driving global trends in criminal malware distribution, and ransomware campaigns involving Clop .(Citation: Proofpoint TA505 Sep 2017)(Citation: Proofpoint TA505 June 2019)(Citation: Proofpoint TA505 Jan 2019)(Citation: NCC Group TA505)(Citation: Korean FSI TA505 2020)
G0034	Sandworm Team	Sandworm Team is a destructive threat group that has been attributed to Russia's General Staff Main Intelligence Directorate (GRU) Main Center for Special Technologies (GTS-T) military unit 74455. (Citation: US District Court Indictment GRU Unit 74455 October 2020)(Citation: UK NCSC Olympic Attacks October 2020) This group has been active since at least 2009. (Citation: ISIGHT Sandworm 2014)(Citation: CrowdStrike VOODOO BEAR)(Citation: USDOJ Sandworm Feb 2020)(Citation: NCSC Sandworm Feb 2020)

3. Windows Command shell

It has 20 hits and after filtering it with the current directory :
C:\\\\Users\\\\ADMINI~1\\\\AppData\\\\Local\\\\Temp\\\\2\\\\ i have gotten 11 hits.

#	Time	User	Image / Executable	Parent Image	Command Line	Current Directory	Evidence	MITRE Techniques	Purpose / Notes
	(UT C)						I	D	
1	2024-09-03 20:59:32	Administrator	cmd.exe	powershell.exe	"cmd.exe" /c "net user art-test /add & net user art-test Password123! & net localgroup administrators art-test /add"	C:\Users\ADMINI~1\AppData\Local\Temp\2\	1	T1059.003 (Co-simulation and ShellCMII)	PowerShell — suspicious child process creation

6	202	Adm	sch	cmd.	schtasks /create	C:\Users\ADMIN	1	T10	Pers
4-0		inistr	tas	exe	OnLogon calc.exe	I~1\AppData\Lo		53.	isten
9-0		ator	ks.			cal\Temp\2\		005	ce
3								(Sc	mec
20:								hed	hani
59:								ule	sm
42								d	—
								Tas	runs
								rk)	calc.
									exe
									at
									logo
									n
7	202	Adm	sch	cmd.	schtasks /create	C:\Users\ADMIN	1	T10	Sam
4-0		inistr	tas	exe	OnStartup calc.exe	I~1\AppData\Lo		53.	e —
9-0		ator	ks.			cal\Temp\2\		005	persi
3									sten
20:									ce
59:									via
42									start
									up
									exec
									ution
8	202	Adm	net	cmd.	net1 user art-test	Temp folder	1	T10	Dupl
4-0		inistr	1.e	exe	/add, net1 user			78.	icate
9-0		ator	xe		art-test			002	s
3					Password123!, etc.				confi
20:									rm
59:									sam
18-									e
20:									user
59:									crea
42									tion
									seque
									nce

Commands created and who and where and why

step 3 — Command Breakdown (What, Who, When, Why)

Command	Meaning / Goal	Impact / Intent
net user art-test /add	Creates a new local user	Establish foothold
net user art-test Password123!	Sets password	Enables login access
net localgroup administrators art-test /add	Adds to admin group	Gains full system privileges
REG ADD ... \Run ... AtomicRedTeam.exe	Adds persistence via registry run key	Ensures malware runs after reboot
schtasks /create OnLogon calc.exe	Creates task to run at login	Alternate persistence
schtasks /create OnStartup calc.exe	Another startup task	Confirms persistence redundancy

These logs show a **sequence of process creations** (Sysmon Event ID 1) on host **EC2AMAZ-IBM5S7O**, executed under the **Administrator** user in **Temp directory**

(C:\Users\ADMINI~1\AppData\Local\Temp\2) — a *highly suspicious location* for administrative commands.

The flow is:

PowerShell → CMD → net.exe → new user creation → admin group addition → registry persistence

What You've Found So Far

You have uncovered a **multi-step attack sequence**, likely **simulated by Atomic Red Team** (used in Wazuh labs) — but representative of a **real intrusion flow**:

1. **Execution (T1059.003)** — Attacker uses PowerShell to spawn cmd.exe
2. **Privilege Escalation (T1078)** — Uses net.exe to create a new privileged user
3. **Persistence (T1053 / T1547)** — Establishes startup registry key & scheduled tasks
4. **Discovery (T1087)** — Gathers account info
5. **Defense Evasion** — Operates from Temp directory, which avoids typical security logs

Summary report 😊

Execution / Privilege Escalation Investigation Summary

During the investigation of the **Privilege Escalation** phase (MITRE ATT&CK techniques **T1059.003 – Windows Command Shell** and **T1078 – Valid Accounts**), suspicious command-line activity was identified on host EC2AMAZ-IBM5S7O (10.0.1.11).

Analysis of Sysmon Event ID 1 logs revealed that a **PowerShell process spawned cmd.exe** from within the **Temp directory**, which is an uncommon and high-risk execution path. The command line executed by this process created a new local account (**art-test**) using **net.exe**, assigned it a password, and added it to the **Administrators group**, effectively granting **full system privileges**.

Further examination showed subsequent commands that:

- Added a **registry run key** (**HKCU\Software\Microsoft\Windows\CurrentVersion\Run**) to execute a binary at startup (MITRE **T1547.001 – Registry Run Keys/Startup Folder**),
- Created **scheduled tasks** configured to launch applications upon logon or system startup (**T1053.005 – Scheduled Task/Job**).

These findings indicate a clear attacker workflow:

1. **Execution:** PowerShell initiated cmd.exe (T1059.003).
2. **Privilege Escalation:** New admin user created via net.exe (T1078).
3. **Persistence:** System modifications ensured continued access (T1053.005, T1547.001).

All activity originated from a privileged account (**Administrator**) and occurred within a short timeframe (20:59:32–20:59:42 UTC), confirming a **scripted or automated intrusion attempt**.

Conclusion:

The attacker leveraged built-in Windows utilities to escalate privileges and establish persistence, following typical “**living off the land**” behavior. The presence of **AtomicRedTeam** strings suggests this may be part of a controlled simulation or red team test, but the pattern is representative of a real-world intrusion chain.

POC

Windows Command Shell

```

data.win.eventdata.logonName [14eba091-7432-e88b-140000000000]
data.win.eventdata.logonId 0x148bea
data.win.eventdata.originalFileName net.exe
data.win.eventdata.parentCommandLine "cmd.exe" /c lnet user art-test /add & net user art-test Password123! & net localgroup administrators art-test /add"
data.win.eventdata.parentImage C:\Windows\System32\cmd.exe
data.win.eventdata.parentProcessGuid [14eba091-78b4-66d7-f801-00000000b901]
data.win.eventdata.parentProcessId 7100
data.win.eventdata.parentUserName EC2AMAZ-IBM5S70\Administrator
data.win.eventdata.processGuid [14eba091-78b4-66d7-fa01-00000000b901]
data.win.eventdata.processId 3308
data.win.eventdata.product Microsoft Windows Operating System
data.win.eventdata.terminalSessionId 2
data.win.eventdata.user EC2AMAZ-IBM5S70\Administrator
data.win.eventdata.utcTime 2024-09-03 20:59:32.234
data.win.system.channel Microsoft-Windows-Sysmon/Operational
data.win.system.computer EC2AMAZ-IBM5S70
data.win.system.eventId 1
data.win.system.eventRecordId 1496
D

```

Events count evolution

Windows Command Shell

Date	Event Count
Sep 3, 2024 @ 23:59:32.725	92036

A C:\Windows\System32\net.exe binary was started by a Windows cmd shell

Table JSON Rule

Field	Value
@timestamp	2024-09-03T20:59:32Z
_id	UVWnZEByCKsITPTiyf...
agent.id	002
agent.ip	10.0.1.11
agent.name	EC2AMAZ-IBM5S70
data.win.eventdata.commandLine	net user art-test /add
data.win.eventdata.company	Microsoft Corporation
data.win.eventdata.currentDirectory	C:\Users\ADMINI-1\AppData\Local\Temp\2\
data.win.eventdata.description	Net Command
data.win.eventdataFileVersion	10.0.20348.1 (WinBuild.160101.0800)
data.win.eventdata.hashes	MD5=540D7FDC6B3C5B66F6188506A4E1D12SHA256=F540747022E0D67722989765B5D8268707EAE71538AE0764110ECE78BD9AEEF6IMPHASH=D45C37A5C97135204AD6E116C3494BC3
data.win.eventdata.image	C:\Windows\System32\cmd.exe
data.win.eventdata.integrityLevel	High
data.win.eventdata.logonGuid	[14eba091-7432-e88b-140000000000]
data.win.eventdata.logonId	0x148bea
data.win.eventdata.originalFileName	net.exe

Details

ID: T1059.003 Name: Windows Command Shell Created Time: Mar 9, 2020 @ 17:12:31.196 Modified Time: Jul 26, 2021 @ 20:13:07.345 Version: 1.2

Description

Adversaries may abuse the Windows command shell for execution. The Windows command shell (cmd) is the primary command prompt on Windows systems. The Windows command prompt can be used to control almost any aspect of a system, with various permission levels required for different subsets of commands. The command prompt can be invoked remotely via Remote Services such as SSH. (Citation: SSH in Windows)

Batch files (ex.: bat or .cmd) also provide the shell with a list of sequential commands to run, as well as normal scripting operations such as conditionals and loops. Common uses of batch files include long or repetitive tasks, or the need to run the same set of commands on multiple systems.

Adversaries may leverage cmd to execute various commands and payloads. Common uses include cmd to execute a single command, or abusing cmd interactively with input and output forwarded over a command and control channel.

Groups

ID	Name	Description
G0045	menuPass	menuPass is a threat group that has been active since at least 2006. Individual members of menuPass are known to have acted in association with the Chinese Ministry of State Security's (MSS) Tianjin State Security Bureau and worked for the Huaying Hailai Science and Technology Development Company. (Citation: DOJ APT10 Dec 2018) (Citation: District Court of NY APT10 Indictment December 2018)
G0018	admin@338	menuPass has targeted healthcare, defense, aerospace, finance, maritime, biotechnology, energy, and government sectors globally, with an emphasis on Japanese organizations. In 2016 and 2017, the group is known to have targeted managed IT service providers (MSPs), manufacturing and mining companies, and a university. (Citation: Palo Alto menuPass Feb 2017) (Citation: CrowdStrike CrowdCast Oct 2013) (Citation: FireEye Poison Ivy) (Citation: PWC Cloud Hopper April 2017) (Citation: FireEye APT10 April 2017) (Citation: DOJ APT10 Dec 2018) (Citation: District Court of NY APT10 Indictment December 2018)
G0128	ZIRCONIUM	ZIRCONIUM is a threat group operating out of China, active since at least 2017, that has targeted individuals associated with the 2020 US presidential election and prominent leaders in the international affairs community. (Citation: Microsoft Targeting Elections September 2020) (Citation: Check Point APT31 February 2021)
G0098	admin@338	admin@338 is a China-based cyber threat group. It has previously used newsworthy events as lures to deliver malware and has primarily targeted organizations involved in financial, economic, and trade policy, typically using publicly available RATs such as Poison Ivy, as well as some non-public backdoors. (Citation: FireEye admin@338)

Wizard Spider is a Russia-based financially motivated threat group originally known for the creation and deployment of TrickBot

Windows Command Shell

ID T1059.003

Tactics Execution

Version 1.2

Recent events 20 hits

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 4, 2024 @ 00:39:35.550	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 4, 2024 @ 00:39:35.535	T1059.003	Execution	4	92052	Windows command prompt started by an abnormal process
Sep 3, 2024 @ 23:59:40.301	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:40.254	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:40.238	T1059.003	Execution	4	92052	Windows command prompt started by an abnormal process
Sep 3, 2024 @ 23:59:43.927	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution

Windows Command Shell

data.win.eventdata.currentDirectory: C:\Users\ADMINI~1\AppData\Local\Temp\l2

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 3, 2024 @ 23:59:40.301	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:40.254	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:40.238	T1059.003	Execution	4	92052	Windows command prompt started by an abnormal process
Sep 3, 2024 @ 23:59:43.927	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:43.896	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:43.865	T1059.003	Execution	4	92052	Windows command prompt started by an abnormal process
Sep 3, 2024 @ 23:59:38.973	T1059.003	Execution	4	92052	Windows command prompt started by an abnormal process
Sep 3, 2024 @ 23:59:32.770	T1059.003 T1574.001	Execution, Persistence, Privilege Escalation, Defense Evasion	3	92036	A C:\Windows\System32\net.exe binary was started by a Windows cmd shell
Sep 3, 2024 @ 23:59:32.756	T1059.003 T1574.001	Execution, Persistence, Privilege Escalation, Defense Evasion	3	92036	A C:\Windows\System32\net.exe binary was started by a Windows cmd shell
Sep 3, 2024 @ 23:59:32.725	T1059.003 T1574.001	Execution, Persistence, Privilege Escalation, Defense Evasion	3	92036	A C:\Windows\System32\net.exe binary was started by a Windows cmd shell

4. Remote Desktop Protocol

ID
T1021.001

Tactics
Lateral Movement

Version 1.1

For the 3 hits it used a window event id : 4624 meaning successful login.

Time (UTC)	Workstation	Source IP	User	Logon Type	Auth Type	Note
20:40:0 6	DESKTOP-00 3	197.237.16. 55	Administrator or	3	NTLM	Possible Pass-the-Hash start
20:40:1 0	DESKTOP-0 03	197.237.16. 55	Administrator or	3	NTLM	Repeat authentication from same IP
20:40:1 9	EC2AMAZ-IBM 5S7O	197.237.16. 55	Administrator or	10	Negotiate	RDP connection established

Logon Type 3 = network logon (used for remote resource access – SMB, NTLM authentication).

Logon Type 10 = Remote Interactive (used by RDP sessions).

NTLM authentication suggests legacy or hash-based authentication – not Kerberos.

The **source IP (197.237.16.55)** remains constant – so that's likely the attacker's machine.

Administrator account used – indicates privilege escalation.

Elevated token = Yes (%1842) – confirms the session has admin privileges.

Authentication Package = NTLM and **logon process = NtLmSsp** – matches MITRE T1550.002 (Pass-the-Hash).

.....** Suspicious Indicators (IOCs / Pointers)

IOC / Field	Value	Why It's Suspicious
Source IP	197.237.16.55	External, public IP – not internal network
Logon Type	10 (RDP), 3 (NTLM)	Suggests remote access via RDP

Authentication Package	NTLM / NTLMv2	Old and vulnerable method; often used in credential relay or hash attacks
User	Administrator	High-value account; shouldn't be accessed remotely this way
Elevated Token	Yes	Privilege escalation confirmed
Workstation Name	DESKTOP-003	Different system – possible lateral movement
Process Name	svchost.exe	Generic system process – might have been used as host for remote session
GeoLocation	Nairobi, Kenya	Matches an external region (verify if expected in environment)

Step 3: MITRE ATT&CK Mapping

MITRE Technique	ID	Description
Pass-the-Hash	T1550.00 2	Attacker used stolen NTLM hashes to authenticate remotely
Remote Desktop Protocol	T1021.00 1	Used for lateral movement into EC2AMAZ-IBM5S70
Domain Accounts	T1078.00 2	Valid domain/administrator credentials abused
Privilege Escalation	(General)	Administrator token obtained
Lateral Movement	(General)	Connection from DESKTOP-003 → EC2AMAZ-IBM5S70

Main things : **What You Should Record in Your Report**

Section: Event Summary

- **Technique:** Remote Desktop Protocol (T1021.001) with Pass-the-Hash (T1550.002)
- **Tactics:** Lateral Movement, Privilege Escalation, Defense Evasion
- **Affected Host:** EC2AMAZ-IBM5S70 (Agent 002)
- **Source IP:** 197.237.16.55
- **Account Used:** Administrator (SID: S-1-5-21-1355279879-2134190647-2577363000-500)

- **Time of Events:** 2024-09-03 20:40:06 → 20:40:19 UTC
- **Authentication Type:** NTLM / Negotiate
- **Logon Types:** 3 (Network), 10 (Remote Interactive)
- **Result:** Successful logon → Privileged session established

Section: Indicators of Compromise (IOCs)

- IP: 197.237.16.55
- Workstation: DESKTOP-003
- Account: Administrator
- Logon Type: 10 (RDP)
- Authentication Package: NTLM V2
- Elevated Token: True

Section: Analysis & Interpretation

The attacker used the Administrator account to establish a Remote Desktop session on the EC2 instance.

The use of NTLM authentication and repeated 4624 logon events within seconds suggests a **Pass-the-Hash attack**.

This provided the attacker with **interactive administrative access** to the system, marking a successful **lateral movement** and **privilege escalation** phase.

POC

Not secure https://3.93.182.88/app/endpoints-summary#/overview/?tab=mitre&agentId=002

Details

ID	Name	Created Time	Modified Time	Version
T1021.001	Remote Desktop Protocol	Feb 11, 2020 @ 21:23:26.059	Mar 31, 2023 @ 00:01:41.927	1.1

Description

Adversaries may use [Valid Accounts](#) to log into a computer using the Remote Desktop Protocol (RDP). The adversary may then perform actions as the logged-on user.

Remote desktop is a common feature in operating systems. It allows a user to log into an interactive session with a system desktop graphical user interface on a remote system. Microsoft refers to its implementation of the Remote Desktop Protocol (RDP) as Remote Desktop Services (RDS). (Citation: TechNet Remote Desktop Services)

Adversaries may connect to a remote system over RDP/RDS to expand access if the service is enabled and allows access to accounts with known credentials. Adversaries will likely use Credential Access techniques to acquire credentials to use with RDP. Adversaries may also use RDP in conjunction with the [Accessibility Features](#) or [Terminal Services DLL](#) for Persistence. (Citation: Aperovitch Malware)

Groups

ID	Name	Description
G0045	menuPass	menuPass is a threat group that has been active since at least 2006. Individual members of menuPass are known to have acted in association with the Chinese Ministry of State Security's (MSS) Tianjin State Security Bureau and worked for the Huayang Hailai Science and Technology Development Company. (Citation: DOJ APT10 Dec 2018) (Citation: District Court of NY APT10 Indictment December 2018)
G0088	TEMP.Veles	TEMP.Veles is a Russia-based threat group that has targeted critical infrastructure. The group has been observed utilizing TRITON, a malware framework designed to manipulate industrial safety systems. (Citation: FireEye TRITON 2019) (Citation: FireEye TEMP.Veles 2018) (Citation: FireEye TEMP.Veles JSON April 2019)
G0102	Wizard Spider	Wizard Spider is a Russia-based financially motivated threat group originally known for the creation and deployment of TrickBot since at least 2016. Wizard Spider possesses a diverse arsenal of tools and has conducted ransomware campaigns against a variety of organizations, ranging from major corporations to hospitals. (Citation: CrowdStrike Ryuk January 2019) (Citation: DHS/CISA Ransomware Targeting Healthcare October 2020) (Citation: CrowdStrike Wizard Spider October 2020)
G0099	Silence	Silence is a financially motivated threat actor targeting financial institutions in different countries. The group was first seen in

Not secure https://3.93.182.88/app/endpoints-summary#/agents?tab=welcome&agent=002&tabView=panels&_g=[filters:(),refreshInterval:(pause:1000)]

Remote Desktop Protocol

Technique details

ID
T1021.001

Tactics
Lateral Movement

Version
1.1

Recent events

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 3, 2024 @ 23:40:19.804	T1021.001 T1078.002	Lateral Movement, Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	92653	User: WORKGROUP\Administrator logged using Remote Desktop Connection (RDP) from ip:197.237.18.55.
Sep 3, 2024 @ 23:40:10.767	T1550.002 T1078.002	Defense Evasion, Lateral Movement, Persistence, Privilege Escalation, Initial Access	6	92657	Successful Remote Logon Detected - User\Administrator - NTLM authentication, possible pass-the-hash attack - Possible RDP connection. Verify that DESKTOP-003 is allowed to perform RDP connections
Sep 3, 2024 @ 23:40:08.066	T1550.002 T1078.002	Defense Evasion, Lateral Movement, Persistence, Privilege Escalation, Initial Access	6	92657	Successful Remote Logon Detected - User\Administrator - NTLM authentication, possible pass-the-hash attack - Possible RDP connection. Verify that DESKTOP-003 is allowed to perform RDP connections

Events count evolution

Rows per page: 10 < 1 >

Not secure https://3.93.182.88/app/endpoints-summary#/agents?tab=welcome&agent=002&tabView=panels&_g=[filters:(),refreshInterval:(pause:1000)]

Remote Desktop Protocol

data.win.system.message *An account was successfully logged on.

Subject:
Security ID: S-1-5-18
Account Name: EC2AMAZ-IBM5S7O
Account Domain: WORKGROUP
Logon ID: 0x3E7

Logon Information:
Logon Type: 10
Restricted Admin Mode: No
Virtual Account: No
Elevated Token: Yes

Impersonation Level: Impersonation

New Logon:
Security ID: S-1-5-21-1355279879-2134190647-2577363000-500
Account Name: Administrator
Account Domain: EC2AMAZ-IBM5S7O
Logon ID: 0x1498EA
Linked Logon ID: 0x0
Network Account Name: -
Network Account Domain: -
Logon GUID: {00000000-0000-0000-0000-000000000000}

Process Information:
Process ID: 0x7e4
Process Name: C:\Windows\System32\svchost.exe

Network Information:
Workstation Name: EC2AMAZ-IBM5S7O
Source Network Address: 197.237.16.55
Source Port: 0

Detailed Authentication Information:
Logon Process: User32
Authentication Package: Negotiate
Transited Services: -
Package Name (NTLM only): -

5. Windows Service

ID
[T1543.003](#)

Tactics
Persistence
Privilege Escalation

Version
1.3

You have **two types of service creation activity** in these logs:

Type	Description	Legitimate or Suspicious?
Velociraptor Service	"C:\Program Files\Velociraptor\Velociraptor.exe" — installed 9/2/2024	Legitimate EDR/forensic tool (normal system service)
AtomicTestService_CMD	"C:\AtomicRedTeam\atomics\T1543.003\bin\AtomicService.exe" — installed 9/3/2024	Suspicious — used to simulate attacker persistence
CaptureService_14c_1ba	"C:\Windows\System32\svchost.exe -k LocalService -p" — modified registry entry	Normally part of Windows, benign

How to Analyze “AtomicTestService_CMD”

This service is the *key IOC* here.

Event 7045

Service Name: AtomicTestService_CMD
Service File Name: C:\AtomicRedTeam\atomics\T1543.003\bin\AtomicService.exe
Service Start Type: demand start
Service Account: LocalSystem

Event 13 (Sysmon)

TargetObject: HKLM\System\CurrentControlSet\Services\AtomicTestService_CMD\ImagePath
Details: C:\AtomicRedTeam\atomics\T1543.003\bin\AtomicService.exe

Interpretation:

- A new Windows service (`AtomicTestService_CMD`) was created.
- The service executable resides under `C:\AtomicRedTeam\atomics...` which is *not a standard Windows directory*.
- It was registered under `HKLM\System\CurrentControlSet\Services*` (the registry path where persistent Windows services live).
- The **LocalSystem** account runs it → gives **SYSTEM-level privileges** (highest privilege).
- The **Sysmon Event ID 13** confirms that the **registry key was written**, proving the persistence mechanism.

So this simulates how an attacker would establish **privilege escalation + persistence** by registering their own binary as a service.

4. What to Document in Your Report

Field	Example
Timestamp	2024-09-03 20:59:45 UTC
Host	EC2AMAZ-IBM5S70
User	NT AUTHORITY\SYSTEM
Service Name	AtomicTestService_CMD
Binary Path	<code>C:\AtomicRedTeam\atomics\T1543.003\bin\AtomicService.exe</code>
Start Type	Demand start
Privilege Level	LocalSystem (SYSTEM)
MITRE ID	T1543.003 – Windows Service
Detection Source	Sysmon 13 + Event 7045
Notes	New service created post-RDP access; demonstrates attacker persistence via malicious Windows service

POC

The screenshot shows a cybersecurity platform's interface. At the top, there are several browser tabs and a navigation bar with links like 'Endpoints' and 'EC2AMAZ-IBMSS7O'. The main content area has tabs for 'Threat Hunting', 'File Integrity Monitoring', 'Configuration Assessment', 'MITRE ATT&CK', and 'Malware Detection'. On the left, a 'Compliance' section displays a donut chart with three segments: red, green, and blue. Below it is a chart titled 'Events count evolution' showing a line graph with data points at 400, 500, and 600. The right side of the screen is dominated by a detailed log entry for a 'Windows Service' event. The log table includes columns for Time, Technique(s), Tactic(s), Level, Rule ID, and Description. One entry is highlighted with a light blue background, showing a timestamp of Sep 3, 2024 @ 00:09:57.551, a rule ID of 61138, and a description of 'New Windows Service Created'. The log table also lists various service configuration details in JSON format.

Table	JSON	Rule
	@timestamp	2024-09-02T21:09:57.551Z
	_id	iziSUEBc-M2Ah084ti
	agent.id	002
	agent.ip	10.0.1.11
	agent.name	EC2AMAZ-IBMSS7O
	data.win.eventdata.accountName	LocalSystem
	data.win.eventdata.imagePath	'C:\Program Files\Velociraptor\Velociraptor.exe' --config 'C:\Program Files\Velociraptor\client.config.yaml' service run
	data.win.eventdata.serviceName	Velociraptor Service
	data.win.eventdata.serviceType	user mode service
	data.win.eventdata.startType	auto start
	data.win.system.channel	System
	data.win.system.computer	EC2AMAZ-IBMSS7O
	data.win.system.eventID	7045
	data.win.system.eventRecordID	94479

The screenshot displays a multi-tab browser window with several tabs open, including 'Endpoints' and 'EC2AMAZ-IBMS7O'. The main content area shows threat hunting metrics like 'Events count evolution' (with a chart showing values around 400-500) and a 'Compliance' circular progress bar. On the right, a detailed view of a 'Windows Service' event is shown, listing various properties such as ID, Status, IP address, Version, and specific service details like Process ID, Rule Name, and Target Object.

ID	Status	IP address	Version
002	disconnected	10.0.1.11	Wazuh v4.8.2

Windows Service

Property	Value
data.win.eventdata.processId	832
data.win.eventdata.ruleName	T1031,T1050
data.win.eventdata.targetObject	HKLMI\System\CurrentControlSet\Services\PrintWorkflow\UserSvc_14c1ba\ImagePath
data.win.eventdata.user	NT AUTHORITY\SYSTEM
data.win.eventdata.utcTime	2024-09-03 20:40:21.419
data.win.system.channel	Microsoft-Windows-Sysmon/Operational
data.win.system.computer	EC2AMAZ-IBMS7O
data.win.system.eventID	13
data.win.system.eventRecordID	1166
data.win.system.keywords	0x8000000000000000
data.win.system.level	4
data.win.system.message	"Registry value set RuleName: T1031,T1050 EventType: 0x1000 UtcTime: 2024-09-03 20:40:21.419 ProcessId: {14eba091-6d2b-66d7-0b00-0000000b901} ProcessId: 832 Image: C:\Windows\system32\services.exe TargetObject: HKLM\System\CurrentControlSet\Services\PrintWorkflow\UserSvc_14c1baImagePath Details: C:\Windows\system32\svchost.exe -k PrintWorkflow User: NT AUTHORITY\SYSTEM"
data.win.system.opcode	0
data.win.system.processID	2812
data.win.system.providerGuid	{57703895-c22a-43e0-bf4c-06f5698ffbf9}
data.win.system.providerName	Microsoft-Windows-Sysmon

Analyst Assessment

The evidence indicates that a new Windows service was created post-compromise, likely as a **persistence mechanism** to maintain privileged access even after reboot or user logoff.

The use of the **LocalSystem** account provides **SYSTEM-level privileges**, representing a significant escalation of privileges.

In this lab scenario, the binary belongs to **Atomic Red Team**, which simulates adversary techniques.

In a production environment, the same behavior would be considered a **critical persistence and privilege escalation event**.

[View Details](#) | [Edit](#) | [Delete](#)

NB : Summary in One Line:

“A suspicious Windows service (‘AtomicTestService_CMD’) was created and registered under SYSTEM privileges to maintain persistence on EC2AMAZ-IBM5S7O, consistent with MITRE ATT&CK technique T1543.003 (Windows Service).”

Windows Service (T1543.003) Summary

During the investigation of host **EC2AMAZ-IBM5S7O (10.0.1.11)**, several service creation events were observed. Among them, a suspicious service named “**AtomicTestService_CMD**” was created and configured to run with **LocalSystem privileges**, using the binary **C:\AtomicRedTeam\atomics\T1543.003\bin\AtomicService.exe**. Event logs (7045 and Sysmon 13) confirmed the creation and corresponding registry modification, indicating a potential **persistence and privilege escalation** attempt.

Although the binary originates from **Atomic Red Team**—used for testing adversary techniques—the behavior closely resembles that of a real attacker establishing persistence via a malicious service. Other identified services such as **Velociraptor Service** and **CaptureService_14c1ba** appeared legitimate and benign.

This activity aligns with **MITRE ATT&CK technique T1543.003 – Create or Modify System Process: Windows Service**, demonstrating how an attacker could maintain privileged, persistent access to the system after compromise.

3. Persistence

1.) Windows Command Shell

Technique details

ID

[T1059.003](#)

Tactics

[Execution](#)

Version 1.2

Okay so filter with currentdirectory : C:\\\\Users\\\\Administrator\\\\AppData\\\\Local\\\\Temp\\\\2\\\\ and got 2 hits that the description was powershellexecution spawned windows command shell instance and the 11hits were for this directory : C:\\\\Users\\\\Administrator\\\\AppData\\\\Local\\\\Temp\\\\2\\\\ and it had this for the description : **Suspicious Windows cmd shell execution**
→ cmd.exe ran, possibly performing discovery or other suspicious tasks.

Windows command prompt started by an abnormal process

→ cmd.exe launched from something *other than* the normal user shell (e.g., by PowerShell, or a service).

net.exe binary was started by a Windows cmd shell

→ The attacker may be enumerating users, groups, or shares.

Key Findings

1. **Multiple suspicious command-line executions** were observed, initiated from **non-standard directories** such as:

- C:\Users\ADMINI~1\AppData\Local\Temp\2\
- C:\Users\Administrator\AppData\Local\Temp\2\

2. These temporary directories are **not typical working directories** for system processes like `cmd.exe`, `sc.exe`, or `net.exe`.

3. **Processes identified:**

- `cmd.exe` spawning `sc.exe` to **create and start a service** named `AtomicTestService_CMD`.
- `cmd.exe` running `net.exe` commands to **create a new user (art-test)** and **add it to the Administrators group**.
- `powershell.exe` executing commands to **copy and start batch scripts (batstartup.bat)** into **Windows startup directories**, indicating **persistence**.

4. **MITRE ATT&CK Techniques Mapped:**

- **T1059.003 – Windows Command Shell** (Execution)
- **T1087 – Account Discovery** (Discovery)
- **T1543.003 – Create or Modify System Process: Windows Service** (Persistence / Privilege Escalation)
- **T1574.001 – DLL Search Order Hijacking** (Persistence / Evasion)
- **T1547.001 – Registry Run Keys / Startup Folder** (Persistence)

5. **Indicators of a Valid Account Being Used:**

- All actions were performed by a **legitimate Administrator account (EC2AMAZ-IBM5S70\\Administrator)**, with **high integrity** and **logon session ID 0x1488EA**.
- No evidence of external compromise credentials, but the **account was leveraged for privilege escalation and persistence** through system modifications.

6. **Suspicious Behavior Summary:**

- Creation of a **new admin account (art-test)** via `net user` commands.
- Use of **service creation (sc.exe create/start)** from **temporary directories** – a hallmark of **malware or attacker simulation (Atomic Red Team T1543.003)**.
- Deployment of **startup scripts** for persistence through PowerShell and `cmd.exe` execution chains.

Table

Summary of Findings – Persistence via Windows Command Shell (T1059.003)

Condensed Table of Key Events

Timestamp (UTC)	Observed Command / Action	Path / Directory	MITRE Analysis ID(s)	Summary
024-09-05 0:59:45.20	cmd.exe created & started :\\Users\\ADMINI~1\\AppData\\Local\\Temp\\2\\powershell]tomicTestService.exe	1059.00	PowerShell spawned process	PowerShell spawned process via custom service creation.
024-09-05 0:59:45.20	c.exe executed	tarted the service :\\Users\\ADMINI~1\\AppData\\Local\\Temp\\2\\tomicTestService.exe	1059.00	Service control operation confirmation.
024-09-05 0:59:32.31	et.exe added user	:\\Users\\ADMINI~1\\AppData\\Local\\Temp\\2\\rt-test and md.exe added to	1059.00	Creation of a new local administrator account.
		dded to administrators group	T1078	Privilege escalation / persistence.
024-09-05 0:59:40.63	cmd.exe executed	:\\Users\\Administrator\\AppData\\Local\\Temp\\2\\powershell]om User Startup	1059.00	User startup folder established via script execution.
		older	1547.00	Persistence.

```
024-09-04T10:59:40.693Z Powershell] cmd.exe executed : \Users\Administrator\AppData\Local\Temp\2\batstartup.bat [1059.00]
  launched by atstartup.bat [1547.00]
  execution ensures persistence on system
  ProgramData startup folder
```

Detailed Summary Report

Between **September 3–4, 2024**, multiple **Windows Command Shell (cmd.exe)** executions were observed originating from **non-standard directories** (`AppData\Local\Temp\2\`) on host **EC2AMAZ-IBM5S70 (10.0.1.11)** under the **Administrator** account.

Analysis of Sysmon logs revealed the following sequence of suspicious actions:

1. **PowerShell launched cmd.exe** to create and start a custom service (`AtomicTestService_CMD`) using `sc.exe`.
2. **cmd.exe spawned net.exe** to add a new administrative user (`art-test`), indicating account persistence or privilege escalation.
3. **PowerShell executed scripts to copy and run batstartup.bat** within Windows Startup directories, establishing startup-based persistence.

All actions were executed with **high integrity (Administrator privileges)** and originated from temporary folders, which is atypical for legitimate system operations.

The observed behavior aligns with **MITRE ATT&CK techniques**:

- **T1059.003 – Windows Command Shell**
- **T1543.003 – Create/Modify System Process**
- **T1547.001 – Startup Folder Persistence**
- **T1078 – Valid Accounts**

These activities collectively demonstrate **persistence and execution mechanisms** commonly seen in post-exploitation stages or Atomic Red Team simulations used for security control validation.

Key Takeaways

- **Persistence achieved** via service creation and startup folder scripts.
- **Privilege escalation indicators** through admin account creation ([art-test](#)).
- All executions used **cmd.exe and PowerShell from Temp directories**, suggesting script-based automation or testing.
- The events map directly to **Execution** and **Persistence** tactics under the MITRE ATT&CK framework.

(**Persistence** achieved via:

- **Service creation** ([AtomicTestService_CMD](#))
- **Startup folder script execution** ([batstartup.bat](#))

Privilege escalation/persistence through **admin account creation** ([art-test](#))

All commands executed via **cmd.exe / PowerShell in temporary directories**, a common indicator of **manual attacker scripting or simulation testing**.

Activity represents **Execution** and **Persistence** tactics within the MITRE ATT&CK framework.

).

POC

Endpoints EC2AMAZ-IBM5S70

Windows Command Shell

ID	Status	IP address	Version
002	disconnected	10.0.1.11	Wazuh v4.8.2

MITRE ATT&CK

Compliance

Events count evolution

data.win.system.channel Microsoft-Windows-Sysmon/Operational
data.win.system.computer EC2AMAZ-IBM5S70
data.win.system.eventID 1
data.win.system.eventRecordID 1829
data.win.system.keywords 0x8000000000000000
data.win.system.level 4
data.win.system.message "Process Create:
RuleName: -
UtcTime: 2024-09-03 21:39:34.301
ProcessGuid:{14eba091-8216-66d7-0001-00000000ba01}
ProcessId: 496
Image: C:\Windows\System32\cmd.exe
FileVersion: 10.0.20345.2461 (WinBuild.160101.0800)
Description: Windows Command Processor
Product: Microsoft® Windows® Operating System
Company: Microsoft Corporation
OriginalFileName: Cmd.Exe
CommandLine: "C:\Windows\System32\cmd.exe" /d /c C:\Windows\System32\collector.cmd configure
CurrentDirectory: C:\Windows\system32\
User: NT AUTHORITY\SYSTEM
LogonGuid: {14eba091-81d9-66d7-e703-000000000000}
LogonId: 0x3E7
TerminalSessionId: 0
IntegrityLevel: System
Hashes:
MD5={E713C2B3980F48E0720375E5560B72 SHA256={06DFER939B89631B0D1B99B34C7A75466581F75EC074FD
D48854F23B3C2D0.MPHASH=D60B77062898DC6BFAE7FE11A0F800C
ParentProcessGuid: {14eba091-81d9-66d7-2300-00000000ba01}
ParentProcessId: 1708
ParentImage: C:\Windows\System32\svchost.exe
ParentCommandLine: C:\Windows\System32\svchost.exe -k netsvcs -p -s Schedule
ParentUser: NT AUTHORITY\SYSTEM"

data.win.system.opcode 0

Endpoints EC2AMAZ-IBM5S70

Windows Command Shell

ID	Status	IP address	Version
002	disconnected	10.0.1.11	Wazuh v4.8.2

MITRE ATT&CK

Compliance

Events count evolution

data.win.system.computer EC2AMAZ-IBM5S70
data.win.system.eventID 1
data.win.system.eventRecordID 1500
data.win.system.keywords 0x8000000000000000
data.win.system.level 4
data.win.system.message "Process Create:
RuleName: -
UtcTime: 2024-09-03 20:59:32.371
ProcessGuid:{14eba091-7804-66d7-fe01-00000000b901}
ProcessId: 6780
Image: C:\Windows\System32\winet.exe
FileVersion: 10.0.20348.1 (WinBuild.160101.0800)
Description: Net Command
Product: Microsoft® Windows® Operating System
Company: Microsoft Corporation
OriginalFileName: net.exe
CommandLine: net localgroup administrators art-test /add
CurrentDirectory: C:\Users\ADMININ-1\AppData\Local\Temp\2\
User: EC2AMAZ-IBM5S70\Administrator
LogonGuid: {14eba091-7432-66d7-ea88-140000000000}
LogonId: 0x1488EA
TerminalSessionId: 2
IntegrityLevel: High
Hashes:
MD5={4007FDCB89C5B66F0618B50A4AE1D12 SHA256={F54074702E0D67722989765B5D8268707E4E71538AE076
4110EDECTB009AEF6.MPHASH=D45C37A5C97135204AD6E116C34946C3
ParentProcessGuid: {14eba091-7804-66d7-f801-00000000b901}
ParentProcessId: 7100
ParentImage: C:\Windows\System32\cmd.exe
ParentCommandLine: "cmd.exe" /c "net user art-test /add & net user art-test Password123! & net localgroup administrators art-test /add"
ParentUser: EC2AMAZ-IBM5S70\Administrator"

data.win.system.opcode 0

Windows Command Shell

Technique details

ID: T1059.003

Tactics: Execution

Version: 1.2

Recent events (20 hits)

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 4, 2024 @ 00:39:35.550	T1087 T1059.003	Discovery; Execution	3	92032	Suspicious Windows cmd shell execution
Sep 4, 2024 @ 00:39:35.538	T1059.003	Execution	4	92052	Windows command prompt started by an abnormal process
Sep 3, 2024 @ 23:59:46.301	T1087 T1059.003	Discovery; Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:46.254	T1087 T1059.003	Discovery; Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:46.238	T1059.003	Execution	4	92052	Windows command prompt started by an abnormal process
Sep 3, 2024 @ 23:59:43.927	T1087 T1059.003	Discovery; Execution	3	92032	Suspicious Windows cmd shell execution

Events count evolution

Windows Command Shell

data.win.system.eventRecordID	1831
data.win.system.keywords	0x8000000000000000
data.win.system.level	4
data.win.system.message	<p>"Process Create: RuleName: - UtcTime: 2024-09-03 21:39:34.350 ProcessGuid: {14eb091-8216-66d7-0201-00000000ba01} ProcessId: 3824 Image: C:\Windows\System32\cmd.exe FileVersion: 10.0.20348.2461 (WinBuild.160101.0800) Description: Windows Command Processor Product: Microsoft Windows® Operating System Company: Microsoft Corporation OriginalFileName: Cmd.exe CommandLine: C:\Windows\System32\cmd.exe /c C:\Windows\System32\reg.exe query HKEY_LOCAL_MACHINE\Software\Windows\SoftwareInventoryLogging\N collectionstate /reg:64 CurrentDirectory: C:\Windows\system32\ User: NT AUTHORITY\SYSTEM LogonGuid: {14eb091-81d8-66d7-e703-000000000000} LogonType: 0x3E7 TerminalSessionId: 0 IntegrityLevel: System Hashes: MD5={4E713CB3B980E48E0720375E5560B72}, SHA256=06DFFB939B896831BD91B96B34C7A75466581F75EC074FD D498554C2383CDC0, IMPHASH=D69877062898DC68FAE7FE11A0F8806C ParentProcessGuid: {14eb091-8216-66d7-0001-00000000ba01} ParentProcessId: 4964 ParentImage: C:\Windows\System32\cmd.exe ParentCommandLine: "C:\Windows\System32\cmd.exe" /d /c C:\Windows\System32\siollector.cmd configure ParentUser: NT AUTHORITY\SYSTEM"</p>
data.win.system.opcode	0
data.win.system.processID	2916
data.win.system.providerGuid	{5770389f-c22a-43e0-bf4c-06f5698ffbd9}

Events count evolution

2.) Remote domain protocol RDP

3hits : ID

T1021.001

Tactics
Lateral Movement

Version

1.1

Findings from the 3 hits :

Remote logon sessions via RDP using **Administrator credentials**.

Source IP 197.237.16.55 (external/public IP, geolocated to **Nairobi, Kenya**) connecting to:

- Host **EC2AMAZ-IBM5S70** (internal IP **10.0.1.11**).

Multiple successful **Event ID 4624 (Logon Success)** events with:

- **LogonType = 10** → Remote Interactive (RDP)
- **LogonType = 3** → Network Logon (SMB/NTLM over network)

Authentication method: **NTLM / NTLMv2**, possibly **Pass-the-Hash (T1550.002)**.

All actions under **Administrator**, meaning **high privilege**.

Key evidence suggesting possible **malicious or test activity**:

- Multiple rapid logons (within ~13 seconds).
- Use of **NTLM authentication** instead of Kerberos – often seen in **pass-the-hash**.
- Remote logon using **Administrator**, which attackers often exploit for full access.
- Logons from a **non-domain host** (**DESKTOP-003**), suggesting external system.

IOCs

You must record the following critical IOCs (Indicators of Compromise) and metadata for your report:

Indicator	Evidence / Value	Why It Matters
Timestamp(s)	2024-09-03 20:40:06 → 20:40:19 UTC	This shows the sequence of the remote RDP connections.
Source IP	97.237.16.55	External IP initiating the RDP session – possible attacker or tester endpoint.
Workstation Name (Source)	DESKTOP-003	The machine connecting via RDP – identify if legitimate or rogue.
Destination Host	C2AMAZ-IBM5S70 (10.0.1.11)	The internal host accessed through RDP.

Username Used	<code>Administrator</code>	High-value account used for remote access.
Authentication Type	<code>TLM / NTLMv2</code>	Indicates possible pass-the-hash or non-Kerberos authentication.
Logon Types	<code>0 (RDP) and 3 (Network)</code>	Confirms both interactive RDP and network logons occurred.
Process	<code>: \Windows\System32\svchost.exe</code>	Used to handle RDP logon session (system-level).
Geolocation	Nairobi, Kenya	Useful for correlation if the organization operates elsewhere.
Technique IDs	<code>T1021.001, T1078.002, T1550.002</code>	Mapped MITRE techniques (RDP, Valid Accounts, Pass-the-Hash).

Summary table

Include a **summary table** like this:

Timestamp (UTC)	Source IP / Host	Destination IP / Host	Username	Logon Type	Auth	MITRE Method	Remarks
2024-09-03 0:40:06	97.237.16.55 (ESKTOP-003)	C2AMAZ-IEsktop003	Administrator	Network	TLMv2	1550.002	Possible RDP attempt
2024-09-03 0:40:08	97.237.16.55 (ESKTOP-003)	C2AMAZ-IEsktop003	Administrator	Network	TLMv2	1550.002	Successful RDP attempt
						1021.001	Pass-the-Hash
						1021.001	Remote logon (network)

024-09-03 97.237.16.55 C2AMAZ-IEAdministrator0 (RDP) legotiate 1021.001 DP logon
0:40:19 /ORKGROUP 15S70 1078.002 stablished
uccessfully

Short Summary Report (for your report section)

Summary: Remote Desktop Protocol (T1021.001) – Persistence & Lateral Movement

Between **September 3, 2024, at 20:40:06 and 20:40:19 UTC**, three consecutive successful logon events were detected on host **EC2AMAZ-IBM5S70 (10.0.1.11)** under the **Administrator** account.

The connections originated from external IP **197.237.16.55** (workstation **DESKTOP-003**, geolocated in Nairobi, Kenya).

The authentication used **NTLMv2** with **logon types 3 and 10**, corresponding to **network and RDP logons** respectively. These characteristics, combined with the usage of the Administrator account and NTLM authentication, align with possible **Pass-the-Hash (T1550.002)** or **valid account misuse (T1078.002)**.

Such activity may represent **lateral movement or persistence** by a threat actor maintaining access through RDP after initial compromise.

Further validation is recommended to determine whether **DESKTOP-003** is an authorized administrative endpoint.

POC

KaliGPT - Wazuh forensic investigation

Logs from a non-domain host (DESKTOP-003), suggesting external system.

What to Document in Your Report

Include a summary table like this:

Timestamp (UTC)	Source IP / Host	Destination Host	Username	Logon Type	Auth Method	MITRE Technique	Remarks
2024-09-03 20:40:06	197.237.16.55 / DESKTOP-003	EC2AMAZ-IBM5S70	Administrator	3 (Network)	NTLMv2	T1550.002 / T1021.001	Possible pass-the-hash RDP attempt
2024-09-03 20:40:08	197.237.16.55 / DESKTOP-003	EC2AMAZ-IBM5S70	Administrator	3 (Network)	NTLMv2	T1550.002 / T1021.001	Successful remote logon (network)
2024-09-03 20:40:19	197.237.16.55 / WORKGROUP	EC2AMAZ-IBM5S70	Administrator	10 (RDP)	Negotiate	T1021.001 / T1078.002	RDP logon established successfully

Screenshots to Capture

For your documentation and report, capture clear screenshots of:

- Wazuh Dashboard (or Kibana) showing the 3 events
- The table listing all three RDP logs with timestamps and rule IDs (92853 and 92657).
- Highlight the Source IP, Username, and MITRE technique column.
- The JSON detail view for each event (expand one as example):

```

{
    "key": "ipAddress": "197.237.16.55",
    "targetUserName": "Administrator",
    "logonType": "10" or "8",
    "authenticationPackageName": "NTLM"
}

```

+ Ask anything

Not secure https://54.226.11.7/app/endpoints-summary#agents?tab=welcome&agent=002&tabView=panels..._g=filters:t,refreshInterval:pause:it...

Endpoints EC2AMAZ-IBM5S70

Remote Desktop Protocol

ID	Status	IP address	Version
002	disconnected	10.0.1.11	Wazuh v4.8.2

Compliance

Events count evolution

```

{
    "targetLinkedLogonId": "0x0",
    "impersonationLevel": "0x1833",
    "ipAddress": "197.237.16.55",
    "authenticationPackageName": "NTLM",
    "workstationName": "DESKTOP-003",
    "logonType": "10",
    "targetLogonId": "0x18ac2",
    "logonProcessName": "NtLssp",
    "logonGuid": "00000000-0000-0000-0000-000000000000",
    "targetUserName": "Administrator",
    "keyLength": "128",
    "hexKey": "001842",
    "subjectUserId": "-5-1-8-0",
    "processId": "0",
    "ipPort": "0",
    "targetDomainName": "EC2AMAZ-IBM5S70",
    "targetUserId": "1-5-21-1355279879-2134198647-257736300-500",
    "virtualAccount": "0x1843",
    "logonType": "3"
},
{
    "system": {
        "eventId": "4624",
        "keywords": "0x0200000000000000",
        "providerGuid": "54846025-5478-4094-a5ba-3e3b0328c30d",
        "level": "1",
        "channel": "Security",
        "opcode": "0",
        "message": "\r\nAn account was successfully logged on.\r\n\r\nSubject:\r\nSecurity ID:\r\nt5-1-0\r\nAccount Name:\r\nt-Workstation Name:\r\nLogon ID:\r\nLogon Type:\r\nAccount Domain:\r\nLogon Process:\r\nLogon GUID:\r\nNetwork Information:\r\nWorkstation Name:\r\nSource Network Address:\r\nPort:\r\nDetailed Authentication Information:\r\nLogon Process:\r\nAuthentication Package:\r\nTransited Services:\r\nPackage Name (NTLM):\r\nLength:\r\nThis event is generated when a logon session is created. It is generated on the computer on which the user has accessed a network share or service. This event is most commonly a service such as Winlogon, or a local process such as Services.exe.\r\n\r\nThe logon type field indicates the kind of logon that occurred. The most common types are 2 (interactive) and 3 (network). The impersonation level field indicates the extent to which a process in the session can impersonate another user. The information fields provide detailed information about the logon session. Logon ID is a unique identifier that will be used for the event with a KERB event.\r\nTransited services indicate which intermediate services have participated in this logon request.\r\n\r\nThe package name indicates which sub-protocol was used among the NTLM protocols.\r\n\r\nKey length indicates the length of the generated session key.\r\nThis will be 0 if no session key was requested.\r\n",
        "version": "2"
    }
}

```

3.) Account Manipulation - 4hits

ID

T1098

Tactics

Persistence

Version

2.5

From the 4 hits i got this

#	Event ID	Description	What Happened	MITRE Technique
1	472	User account created	Administrator created a new account named art-test . Initially disabled (Account Disabled, Password Not Required).	T1098 – Account Manipulation
2	472	User account enabled	The previously created art-test account was enabled by the same Administrator.	T1098 – Account Manipulation
3	473	User account changed	Administrator changed the art-test account attributes (password last set, UAC values, controls).	T1098 – Account Manipulation
4	473	User account changed	Another attribute modification to the same account seconds later.	T1098 – Account Manipulation

NB:

So effectively:

→ A new user account (**art-test**) was created → enabled → modified twice – all within one second.

This pattern is **typical of persistence creation**, where an attacker adds a **backdoor administrative account** to ensure continued access.

Key Details / Indicators of Compromise (IOCs)

Record these in your notes — they are the high-value fields:

Indicator	Value / Observation	Why It Matters
Timestamp	2024-09-03 @ 20:59:32 – 20:59:33 UTC	All actions occurred in the same second, suggesting automation or script use.
Executor Account	Administrator (SID ...-500)	The default admin account was used — very powerful and often targeted.
Target Account	art-test (SID ...-1000)	Newly created account — suspicious, used for persistence.

Event IDs	4720 (Create), 4722 (Enable), 4738 (Change)	Standard Windows Security events for account manipulation.
Account Control Changes	Old UAC 0x0 → New 0x15 → 0x10	Indicates the account was disabled → enabled → modified (permissions).
Password Last Set	9/3/2024 8:59:32 PM	Password was manually defined right after creation.
Privileges Added	None listed (no admin group recorded) → but created by Administrator	If not directly added to admin group, attacker might escalate later.
Machine	EC2AMAZ-IBM5S7O (10.0.1.11)	Same endpoint seen earlier in RDP activity — strong correlation.

What This Means in Context

These logs are **high-confidence indicators of persistence**.

They show an **Administrator-level user (likely compromised)** creating and enabling another local account (**art-test**) almost instantly.

Possible reasons:

- Adversary created **art-test** for **long-term backdoor access** (Persistence → T1098).
- The activity happened just minutes after suspicious **cmd.exe / net.exe** executions at **23:59:32 UTC** — this **ties directly to the Persistence stage** you observed earlier.

So, the **attack flow** looks like:

- ① Valid account (Administrator) used via RDP →
- ② Commands executed via cmd.exe →
- ③ New user **art-test** created → enabled → changed for persistence.

Table

4 What to Record / Include in Your Report

Timestamp	Event ID	Action	Executor	Target Account	MITRE ID	Notes / Significance
2024-09-03 20:59:32	4720	User account created	Administrator	art-test	T1098	New local account created, possibly backdoor
2024-09-03 20:59:32	4722	User account enabled	Administrator	art-test	T1098	Account immediately enabled
2024-09-03 20:59:32	4738	User account changed	Administrator	art-test	T1098	Password and UAC updated
2024-09-03 20:59:33	4738	User account changed	Administrator	art-test	T1098	Further modification of attributes



6 Short Summary Report Section

Summary: Account Manipulation (T1098) – Persistence via New User Account

At **2024-09-03 20:59:32 UTC**, multiple Windows Security events (4720, 4722, 4738) were logged on host **EC2AMAZ-IBM5S7O (10.0.1.11)**.

These indicate that the **Administrator account** created and modified a new user named **art-test**.

The account was **created, enabled, and altered** within a single second — suggesting scripted or automated manipulation.

This behavior aligns with **MITRE ATT&CK T1098 – Account Manipulation**, commonly used by attackers to **maintain persistent access** by creating covert accounts after compromise.

Given the proximity to prior **RDP** and **command-shell execution** events, this likely represents a **persistence mechanism** established following administrative access.

Key Findings:

- Host: EC2AMAZ-IBM5S7O (10.0.1.11)
- Executor: Administrator (SID ...-500)
- Target: art-test (SID ...-1000)
- Events: 4720 (Create), 4722 (Enable), 4738 (Change)
- MITRE Technique: T1098 – Account Manipulation
- Timestamp: 2024-09-03 20:59:32 – 20:59:33 UTC

Conclusion:

The rapid creation and modification of the **art-test** account by an Administrator strongly suggest **malicious persistence activity**. The account should be treated as suspicious, verified for necessity, and disabled pending further investigation.

POC

Endpoints EC2AMAZ-IBM5S70

Account Manipulation

```

"win": {
    "eventData": {
        "subjectUserId": "0x148Bea",
        "scriptPath": "0x01307",
        "passwordLastSet": "0/3/2024 8:59:32 PM",
        "homeDirectory": "\%K1732",
        "subjectDomainName": "EC2AMAZ-IBM5S70",
        "displayName": "\%K1792",
        "accountExpires": "\%K1794",
        "homeAccountName": "\%K1793",
        "targetAccountName": "art-test",
        "targetUserName": "art-test",
        "subjectUserId": "S-1-5-21-1355279879-2134190647-2577363800-508",
        "primaryGroupId": "518",
        "logonDomain": "\%K1797",
        "targetDomainName": "EC2AMAZ-IBM5S70",
        "processId": "0x148Bea",
        "userPermissions": "0x0000000000000000",
        "oldLogonValue": "0x0000000000000000",
        "newLogonValue": "0x0000000000000000",
        "targetSid": "S-1-21-1355279879-2134190647-2577363800-1009",
        "subjectUserName": "Administrator"
    },
    "system": {
        "eventId": "4738",
        "keywords": "0x8020000000000000",
        "providerGuid": "{54840902-5478-4994-a5ba-3e3b0328c30d}",
        "level": "0",
        "channel": "Security",
        "opcode": "0",
        "message": "\A user account was changed.\r\n\r\nSubject:\r\n\r\n\\Security ID:\\T\\S-1-5-21-1355279879-2134190647-2577363800-508\r\n\\Account Name:\\Administrator\r\n\\Account Domain:\\EC2AMAZ-IBM5S70\r\n\\Logon ID:\\0x148Bea\r\n\\Target Account:\\Security ID:\\T\\S-1-5-21-1355279879-2134190647-2577363800-1009\r\n\\Account Name:\\art-test\\Display Name:\\art-test\\User sets\\\\Primary Group ID:\\518\\LowestrDelegation\\UAC Value:\\0x0100\\Profile Path:\\\\value not set\\\\User Workstations:\\value not set\\\\Password Last Set:\\0/3/2024 8:59:32\\PW\\\\Account Expires:\\never\\\\Primary Group ID:\\518\\LowestrDelegation\\UAC Value:\\0x0100\\\\User Account Control:\\\\User Parameters:\\\\SID History:\\\\UAC Hours:\\\\All\\\\Logon Hours:\\\\All\\\\Additional Information:\\\\Privileges:\\\\-\\",
        "version": "0",
        "systemTime": "2024-09-09T09:20:59:32.3587106Z",
        "eventRecordID": "2082251",
        "threadID": "3868",
        "computer": "EC2AMAZ-IBM5S70",
        "task": "13824",
        "processID": "856",
        "severityValue": "856",
        "providerName": "Microsoft-Windows-Security-Auditing"
    }
}

```

Events count evolution

Endpoints EC2AMAZ-IBM5S70

Account Manipulation

```

"agent": {
    "ip": "0.0.1.1",
    "name": "EC2AMAZ-IBM5S70",
    "id": "002"
},
"manager": {
    "name": "wazuh.manager"
},
"data": {
    "win": {
        "eventData": {
            "subjectUserId": "0x148Bea",
            "scriptPath": "0x148Bea",
            "passwordLastSet": "0/3/2024 8:59:32 PM",
            "homeDirectory": "\%K1732",
            "subjectDomainName": "EC2AMAZ-IBM5S70",
            "targetDomainName": "EC2AMAZ-IBM5S70",
            "targetSid": "S-1-21-1355279879-2134190647-2577363800-1009",
            "subjectUserName": "Administrator"
        },
        "system": {
            "eventId": "4722",
            "keywords": "0x8020000000000000",
            "providerGuid": "{54840902-5478-4994-a5ba-3e3b0328c30d}",
            "level": "0",
            "channel": "Security",
            "opcode": "0",
            "message": "\A user account was enabled.\r\n\r\nSubject:\r\n\r\n\\Security ID:\\T\\S-1-5-21-1355279879-2134190647-2577363800-508\r\n\\Account Name:\\Administrator\r\n\\Account Domain:\\EC2AMAZ-IBM5S70\r\n\\Logon ID:\\0x148Bea\r\n\\Target Account:\\Security ID:\\T\\S-1-5-21-1355279879-2134190647-2577363800-1009\r\n\\Account Name:\\art-test\\Display Name:\\art-test\\User sets\\\\Primary Group ID:\\518\\LowestrDelegation\\UAC Value:\\0x0100\\Profile Path:\\\\value not set\\\\User Workstations:\\value not set\\\\Password Last Set:\\0/3/2024 8:59:32\\PW\\\\Account Expires:\\never\\\\Primary Group ID:\\518\\LowestrDelegation\\UAC Value:\\0x0100\\\\User Account Control:\\\\User Parameters:\\\\SID History:\\\\UAC Hours:\\\\All\\\\Logon Hours:\\\\All\\\\Additional Information:\\\\Privileges:\\\\-\\",
            "version": "0",
            "systemTime": "2024-09-09T09:20:59:32.2869902Z",
            "eventRecordID": "2082247",
            "threadID": "972",
            "computer": "EC2AMAZ-IBM5S70",
            "task": "13824",
            "processID": "856",
            "severityValue": "856",
            "providerName": "Microsoft-Windows-Security-Auditing"
        }
    },
    "rule": {
        "is": true,
        "level": 8,
        "hipaa": [
            ...
        ]
    }
}

```

Events count evolution

KaliGPT - Wazuh forensic

Commands executed via cmd.exe →

New user art-test created → enabled → changed for persistence.

What to Record / Include in Your Report

Timestamp	Event ID	Action	Executor	Target Account	MITRE ID	Notes / Significance
2024-09-03 20:59:32	4720	User account created	Administrator	art-test	T1098	New local account created, possibly backdoor
2024-09-03 20:59:32	4722	User account enabled	Administrator	art-test	T1098	Account immediately enabled
2024-09-03 20:59:32	4738	User account changed	Administrator	art-test	T1098	Password and UAC updated
2024-09-03 20:59:33	4738	User account changed	Administrator	art-test	T1098	Further modification of attributes

Screenshots to Capture

For documentation:

- The MITRE Attack tab showing T1098 – Account Manipulation with 4 hits.
- The Wazuh log table with timestamps and Rule IDs (60109, 60110).
- One expanded JSON view (Event 4738 or 4720) showing:
 - "subjectUserName": "Administrator"
 - "targetUserName": "art-test"
 - "eventId": "4720" (or 4738)
 - "passwordLastSet" field.
- The timeline showing how these occurred second after the Persistence (cmd.exe) activity.

Ask anything

ChatGPT can make mistakes. Check important info.

4.) Windows service

Windows Service

Technique details

ID

T1543.003

Tactics

Persistence

Privilege Escalation

Version

1.3

Table



2. Key Things to Record in Your Report / Table

For your documentation or final report, record the core forensic attributes:

Timest amp (UTC)	E v e n t I D	Service Name	Binary / ImagePath	St ar t Ty p e	Account Name	Process / User Creating It	R u l e I e l (M D TR E)	Tec hni qu e e (M I D TR E)
2024-0 9-03T2 0:59:4 6.332Z	7 0 4 5	AtomicTe stService _CMD	C:\AtomicRedTeam\atom ics\T1543.003\bin\Ato micService.exe	d e m a n d st ar t	LocalSys tem	services. exe / NT AUTHOR ITY\SYS TEM	6 1 1 3 8 nd ow s Ser vic e)	T1 543 .00 3 (Wi nd ow s Ser vic e)
2024-0 9-03T2 0:59:4 6.285Z	1 3 4 2	AtomicTe stService _CMD	C:\AtomicRedTeam\atom ics\T1543.003\bin\Ato micService.exe	R e gi st ry S et	NT AUTHOR ITY\SYS TEM	services. exe	9 2 3 0 7	T1 543 .00 3 7

2024-09-03T20:40:22.731Z	1	WpnUser	C:\Windows\system32\services.exe	R	NT AUTHORITY\SYSTEM	services.exe	9	T1
2024-09-02T1:09:57.551Z	3	Service_14c1ba	vhost.exe -k UnistackSvcGroup	gi	ITY\SYS		2	.00
				st	TEM		0	3
				ry				7
				S				
				et				
2024-09-02T1:09:57.551Z	7	Velociraptor	"C:\Program Files\Velociraptor\Velociraptor.exe"	a	LocalSystem	services.exe		
	0	tor	--config "C:\Program Files\Velociraptor\client.config.yaml"	ut	tem			
	4	Service	service run	o				
	5			st				
				ar				
				t				

Interpretation Summary (Refined with Hit Counts)

1. Sysmon Event ID 13 (15 hits)

- These represent **registry modifications** related to Windows service creation.
- The registry key `HKLM\System\CurrentControlSet\Services\<ServiceName>\ImagePath` was modified 15 times — meaning several registry entries were set or updated, possibly by the same or multiple test services.
- This confirms **active modification of Windows service configurations** in the registry — consistent with **MITRE ATT&CK T1543.003 (Windows Service – Persistence & Privilege Escalation)**.
- The responsible process: `services.exe`, running under **NT AUTHORITY\SYSTEM**.
- This shows that the service installation and configuration were done with **system-level privileges**, ensuring persistence and potential privilege escalation.

2. Windows Event ID 7045 (2 hits)

- These are **Service Control Manager (SCM)** events that explicitly record the **creation of new services**.
- The two services identified are:
 - `AtomicTestService_CMD` → linked to **Atomic Red Team test** (`C:\AtomicRedTeam\atomics\T1543.003\bin\AtomicService.exe`)
 - `Velociraptor Service` → a **legitimate security tool** configured for auto-start (`C:\Program Files\Velociraptor\Velociraptor.exe`)

- Both were installed under the **LocalSystem** account — the highest Windows privilege context — meaning they can execute with **full system rights**.
-

Key Takeaways

- 15 registry modification events (Event ID 13)** confirm **multiple service configuration changes**, likely corresponding to service creation or updates.
 - 2 explicit service creation events (Event ID 7045)** confirm actual **new service installations** on the system.
 - The persistence activity involves both:
 - A **simulated attack** (Atomic Red Team)
 - A **legitimate security agent** (Velociraptor)
 - Both actions demonstrate **persistence through service installation** and **privilege escalation potential** via system-level execution.
-

Findings: Windows Service Persistence (T1543.003)

What We Observed

- Two new services were created** on the monitored host (**EC2AMAZ-IBM5S70**):
 - AtomicTestService_CMD**
 - Binary path:** C:\AtomicRedTeam\atomics\T1543.003\bin\AtomicService.exe
 - Start type:** Demand start
 - Account:** LocalSystem
 - Event IDs:** 7045 (creation) and 13 (registry modification)
 - Timestamp:** 2024-09-03 20:59:45-46Z
 - Velociraptor Service**
 - Binary path:** C:\Program Files\Velociraptor\Velociraptor.exe --config C:\Program Files\Velociraptor/client.config.yaml service run
 - Start type:** Auto start
 - Account:** LocalSystem

- Event ID: 7045
- Timestamp: 2024-09-02 21:09:56Z

2. Registry modifications related to these services were logged 15 times (Event ID 13 – Sysmon), confirming manual or programmatic service creation and modification under:

HKLM\System\CurrentControlSet\Services\AtomicTestService_CMD\ImagePath
 HKLM\System\CurrentControlSet\Services\WpnUserService_14c1ba\ImagePath

1. The process performing these edits was `services.exe` running as NT AUTHORITY\SYSTEM.
2. Both services ran under **SYSTEM-level privileges**, which can be used to gain **persistence and privilege escalation**.

🚩 Indicators of Compromise (IoCs)

Type	Indicator	Description
File Path	C:\AtomicRedTeam\atomics\T1543.003\bin\AtomicService.exe	Binary linked to Atomic Red Team persistence simulation
Registry Path	HKLM\System\CurrentControlSet\Services\AtomicTestService_CMD\ImagePath	Registry key indicating service creation
Service Name	AtomicTestService_CMD	Newly created service
Service Name	Velociraptor Service	Legitimate tool service observed
Executable	C:\Program Files\Velociraptor\Velociraptor.exe	Executable registered as a service
Process	C:\Windows\system32\services.exe	Process modifying registry (SYSTEM)

M
privileges
)

Analysis Summary

The logs confirm the **creation and modification of Windows services** to establish persistence, matching MITRE ATT&CK technique **T1543.003 – Windows Service**.

Two service creation events (Event ID 7045) and multiple registry modifications (Event ID 13) indicate both **legitimate activity (Velociraptor)** and **simulated attack behavior (Atomic Red Team test service)**.

The service modifications were performed by `services.exe` under the NT `AUTHORITY\SYSTEM` context, meaning **high privileges** were used — typical of persistence and privilege escalation attempts.

Short Summary Report (for Google Docs)

Persistence via Windows Services (T1543.003):

During analysis, 17 events were detected indicating the creation and modification of Windows services. Two main services were identified —

`AtomicTestService_CMD` and `Velociraptor Service`.

Registry modifications (Event ID 13) and service creation logs (Event ID 7045) confirm that these services were installed and configured under the `LocalSystem` account, granting SYSTEM-level privileges.

The `AtomicTestService_CMD` corresponds to a persistence simulation from Atomic Red Team, while the `Velociraptor` service is a legitimate security tool.

These actions demonstrate the use of Windows services as a method of **persistence and privilege escalation**, consistent with MITRE ATT&CK technique **T1543.003**.

POC

Endpoints EC2AMAZ-IBMSS70

Threat Hunting File Integrity Monitoring Configuration Assessment MITRE ATT&CK Malware De

ID: 002 Status: disconnected IP address: 10.0.1.11 Version: Wazuh v4.8.2

MITRE ATT&CK

Compliance

Events count evolution

```
Windows Service
{
    "name": "EC2AMAZ-IBMSS70",
    "id": "002"
},
"manager": {
    "name": "wazuh_manager"
},
"data": {
    "win": {
        "eventData": {
            "image": "C:\Windows\System32\services.exe",
            "targetObject": "CurrentControlSet\Services\AtomicTestService_CMD\\ImagePath",
            "processId": "[Lebab91-6d2b-66d7-0008-000000000001]",
            "processID": "832",
            "utcTime": "2024-09-03 20:59:45.262",
            "ruleName": "T1031_T1050",
            "details": "C:\Windows\System32\services.exe\\CurrentControlSet\Services\AtomicTestService_CMD\\ImagePath\\ImagePath",
            "eventType": "SetValue",
            "user": "NT AUTHORITY\SYSTEM"
        },
        "system": {
            "eventId": "13",
            "keywords": "0x8000000000000000",
            "providerID": "5770385f-cc2a-43e0-bf4c-0ef508fffd0",
            "level": "4",
            "channel": "Microsoft-Windows-Sysmon/Operational",
            "opcode": "0",
            "message": "Registry value set:\\nRuleName: T1031_T1050\\nEventType: SetValue\\nUtcTime: 2024-09-03 20:59:45.262\\nProcessId: [Lebab91-6d2b-66d7-0008-000000000001]\\nProcessId: 832\\nImage: C:\Windows\System32\services.exe\\CurrentControlSet\Services\AtomicTestService_CMD\\ImagePath\\ImagePath\\ImageDetails:\\n\\nProviderName: Microsoft-Windows-Sysmon\\nVersion: 2\\nSystemTime: \"2024-09-03T20:59:45.2664532Z\",\\nEventRecordId: \"1532\",\\nThreadId: \"3552\",\\nComputerName: \"EC2AMAZ-IBMSS70\",\\nTask: \"13\",\\nProcessID: \"2812\",\\nSeverityValue: \"INFORMATION\",\\nProviderName: \"Microsoft-Windows-Sysmon\"\\n\\n"
        }
    },
    "rule": {
        "firedTimes": 15,
        "mail": false,
        "level": 3,
        "description": "Evidence of new service creation found in registry under \\CurrentControlSet\\Services\\AtomicTestService_CMD\\ImagePath\\ImagePath\\ImageDetails"
    }
}

```

Endpoints EC2AMAZ-IBMSS70

Threat Hunting File Integrity Monitoring Configuration Assessment MITRE ATT&CK Malware De

ID: 002 Status: disconnected IP address: 10.0.1.11 Version: Wazuh v4.8.2

MITRE ATT&CK

Compliance

Events count evolution

```
Windows Service
{
    "name": "EC2AMAZ-IBMSS70",
    "id": "002"
},
"manager": {
    "name": "wazuh_manager"
},
"data": {
    "win": {
        "eventData": {
            "serviceType": "user mode service",
            "accountName": "LocalSystem",
            "ImagePath": "C:\Windows\System32\services.exe\\CurrentControlSet\Services\AtomicTestService_CMD\\ImagePath\\ImagePath",
            "startType": "Demand Start",
            "serviceName": "AtomicTestService_CMD"
        },
        "system": {
            "eventId": "7045",
            "eventSourceName": "Service Control Manager",
            "keywords": "0x8000000000000000",
            "providerGuid": "{95590801-a607-4695-8e1e-2693102012f4}",
            "level": "4",
            "channel": "System",
            "opcode": "0",
            "message": "A service was installed in the system.\\n\\nService Name: AtomicTestService_CMD\\nService File Name: C:\Windows\System32\services.exe\\CurrentControlSet\Services\AtomicTestService_CMD\\ImagePath\\ImagePath\\ImageDetails\\nService Account: LocalSystem\\n\\n"
        }
    },
    "rule": {
        "firedTimes": 1,
        "mail": false,
        "level": 5,
        "description": "New Windows Service Created",
        "groups": [
            "windows",
            "windows_system"
        ]
    }
}

```

KaliGPT - Wazuh forensic

https://chatgpt.com/g-xo5QobsE-kaligpt/c68deed24-955c-8331-a9b6-6b06bc24b6ad#main

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KaliGPT 5

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Registry Key (HKLW path)

Shows the exact registry location where the service configuration is stored — this can reveal manual tampering or scripted persistence.

User / Process Creating It

Indicates which process or user created the service (e.g., NT AUTHORITY\SYSTEM, services.exe). This helps identify the privilege level or attacker process.

2. Key Things to Record in Your Report / Table

For your documentation or final report, record the core forensic attributes:

Timestamp (UTC)	Event ID	Service Name	Binary / ImagePath	Start Type	Account Name	Process / User Creating It	Rule ID	Technique (MITRE)
2024-09-03T20:59:46.332Z	7045	AtomicTestService_CMD	C:\Windows\System32\services.exe\\CurrentControlSet\Services\AtomicTestService_CMD\\ImagePath\\ImagePath	demand start	LocalSystem	services.exe / NT AUTHORITY\SYSTEM	61138	T1543.003 (Windows Service)
2024-09-03T20:59:46.285Z	13	AtomicTestService_CMD	C:\Windows\System32\services.exe\\CurrentControlSet\Services\AtomicTestService_CMD\\ImagePath\\ImagePath	Registry Set	NT AUTHORITY\SYSTEM	services.exe	92307	T1543.003
2024-09-03T20:40:22.731Z	13	WpnUserService_14c1ba	C:\Windows\system32\svchost.exe -k UnistackSvcsGroup	Registry Set	NT AUTHORITY\SYSTEM	services.exe	92307	T1543.003
2024-09-02T21:09:57.551Z	7045	Velociraptor Service	"C:\Program Files\Velociraptor\Velociraptor.exe" --config "C:\Program Files\Velociraptor\client.config.yaml" service run	auto start	LocalSystem	services.exe	61138	T1543.003

+ Ask anything ChatGPT can make mistakes. Check important info.

5.) Valid accounts

Valid Accounts

Technique details

ID

T1078

Tactics

Persistence

Privilege Escalation

Defense Evasion

Initial Access

Version

2.6

73hits : 70 hits for logon type :5 and 3 hits for logon type : 2
i have gotten logontype 5 has 70hits and logontype3 has 3 hits. for the logontype10 and 3 had 0hits.....eventid:4624 had 73hits the other (4625 (Logon failure) 4720 (User account created) 4722 (User account enabled) 4738 (User account changed) 4728/4732 (Added to privileged group)) had 0 hits. for targetusername for the 70hits is SYSTEM ,.....0 for art-test and 0 for administrator.....it has 73hits for the negotiate authentication package and 0 for NTLM .



Persistence – Valid Accounts (T1078) Summary Report

Technique ID: T1078

Tactic: Persistence, Privilege Escalation, Defense Evasion, Initial Access

Event IDs Observed: 4624 (Windows Logon Success)

Total Events: 73 hits

Key Timestamps: September 3, 2024, between 20:40:14 and 21:40:39 (UTC)

Summary of Findings:

During the analysis of Event ID 4624 logs tagged under MITRE ATT&CK technique T1078 (Valid Accounts), a total of 73 successful logon events were detected. The majority of these logons were initiated by **system-level accounts**, including **SYSTEM**, **UMFD-2** (Font Driver Host), and **DWM-2** (Desktop Window Manager). These logons were performed locally (Logon Types 2 and 5) through legitimate system processes such as **winlogon.exe** and **services.exe**, using the **Negotiate** authentication package.

All activities originated from the local machine ([EC2AMAZ-IBM5S70](#)), with **no external IP addresses, NTLM authentications, or network-based logons** observed. The elevated tokens associated with these events correspond to standard Windows behavior where system processes require administrative privileges to function correctly.

Indicators of Compromise (IOCs):

No IOCs or suspicious indicators were identified. There were no unauthorized accounts, anomalous logon attempts, or remote authentication events.

Analysis and Interpretation:

The logon patterns align with **legitimate Windows background operations** rather than malicious persistence mechanisms. The accounts involved ([SYSTEM](#), [UMFD](#), and [DWM](#)) are core components of the Windows OS responsible for service control, font rendering, and window management. The consistent use of the “Negotiate” authentication package and absence of remote connections further confirms that these are **internal service logons**.

Conclusion:

The persistence activity associated with Valid Accounts (T1078) shows **no evidence of compromise or malicious account usage**. All observed events are consistent with expected Windows operational behavior, indicating that **no persistence through valid or stolen credentials was established** on the host system during this timeframe.

POC

The screenshot shows the Wazuh endpoint monitoring interface for agent ID 002. The main panel displays a 'Compliance' donut chart. On the right, a detailed log entry for a successful logon event is shown:

Valid Accounts

data.win.system.message *An account was successfully logged on.

Subject:
Security ID: S-1-5-18
Account Name: EC2AMAZ-IBM5S7OS
Account Domain: WORKGROUP
Logon ID: 0x3E7

Logon Information:
Logon Type: 5
Restricted Admin Mode: -
Virtual Account: No
Elevated Token: Yes

Impersonation Level: Impersonation

New Logon:
Security ID: S-1-5-18
Account Name: SYSTEM
Account Domain: NT AUTHORITY
Logon ID: 0x3E7
Linked Logon ID: 0x0
Network Account Name: -
Network Account Domain: -
Logon GUID: {00000000-0000-0000-0000-000000000000}

Process Information:
Process ID: 0x340
Process Name: C:\Windows\System32\services.exe

Network Information:
Workstation Name: -
Source Network Address: -
Source Port: -

Detailed Authentication Information:
Logon Process: Advapi
Authentication Package: Negotiate
Transited Services: -

The screenshot shows the Wazuh endpoint monitoring interface for agent ID 002. The main panel displays a 'Compliance' donut chart. On the right, a detailed log entry for a logon event is shown:

Valid Accounts

Subject:
Security ID: S-1-5-18
Account Name: EC2AMAZ-IBM5S7OS
Account Domain: WORKGROUP
Logon ID: 0x3E7

Logon Information:
Logon Type: 2
Restricted Admin Mode: -
Virtual Account: Yes
Elevated Token: No

Impersonation Level: Impersonation

New Logon:
Security ID: S-1-5-90-0-2
Account Name: DWM-2
Account Domain: Window Manager
Logon ID: 0x13DE1C
Linked Logon ID: 0x13DE0B
Network Account Name: -
Network Account Domain: -
Logon GUID: {00000000-0000-0000-0000-000000000000}

Process Information:
Process ID: 0x82c
Process Name: C:\Windows\System32\winlogon.exe

Network Information:
Workstation Name: -
Source Network Address: -
Source Port: -

Detailed Authentication Information:
Logon Process: Advapi
Authentication Package: Negotiate
Transited Services: -
Package Name (NTLM only): -
Key Length: 0

The screenshot shows the Wazuh endpoint monitoring interface for agent ID 002. The main panel displays a 'Compliance' donut chart. On the right, a detailed log entry for a logon event is shown:

Valid Accounts

Subject:
Security ID: S-1-5-18
Account Name: EC2AMAZ-IBM5S7OS
Account Domain: WORKGROUP
Logon ID: 0x3E7

Logon Information:
Logon Type: 2
Restricted Admin Mode: -
Virtual Account: Yes
Elevated Token: No

Impersonation Level: Impersonation

New Logon:
Security ID: S-1-5-96-0-2
Account Name: UMD-2
Account Domain: Font Driver Host
Logon ID: 0x13CE0D
Linked Logon ID: 0x0
Network Account Name: -
Network Account Domain: -
Logon GUID: {00000000-0000-0000-0000-000000000000}

Process Information:
Process ID: 0x82c
Process Name: C:\Windows\System32\winlogon.exe

Network Information:
Workstation Name: -
Source Network Address: -
Source Port: -

Detailed Authentication Information:
Logon Process: Advapi
Authentication Package: Negotiate
Transited Services: -
Package Name (NTLM only): -
Key Length: 0

4. Defense Evasion

1.) Windows command shell

Windows Command Shell

Technique details

ID

T1059.003

Tactics

Execution

Version

1.2 with 20hits

11hits for C:\\\\Users\\\\ADMINI~1\\\\AppData\\\\Local\\\\Temp\\\\2\\\\ and 2 hits for :
C:\\\\Users\\\\Administrator\\\\AppData\\\\Local\\\\Temp\\\\2\\\\

Short summary report (what happened & what we captured)

Timeline & actions observed

- At ~2024-09-03 20:59:32 – 20:59:45 UTC the Administrator account on host **EC2AMAZ-IBM5S70 (10.0.1.11)** executed a scripted sequence that:
 - Created a local user **art-test**, set its password (**Password123!**) and added it to the local **Administrators** group.
 - Created scheduled tasks **T1053_005_OnLogon** and **T1053_005_OnStartup** to run **calc.exe** on logon/startup (persistence test).
 - Created and started a Windows service **AtomicTestService_CMD** pointing to **C:\\AtomicRedTeam\\atomics\\T1543.003\\bin\\AtomicService.exe**.

- Added a **HKCU Run** registry key named **Atomic Red Team** pointing at **C:\Path\AtomicRedTeam.exe**.
 - Copied/started a **batstartup.bat** into user and programdata Startup folders and executed it.
- Parent process chain for many actions: **powershell.exe** → **cmd.exe** → **{net.exe, sc.exe, schtasks.exe, reg}**. All run as **Administrator** with high integrity.

What we captured (evidence & artifacts)

- Process creation events (Sysmon EID 1) showing full command lines and parent/child relationships.
- Registry activity / service creation events (Sysmon EID 13, Windows Event 7045) captured earlier tying to **AtomicTestService_CMD**.
- Created user account **art-test** – evidence in command lines and subsequent user-account-change events you supplied earlier.
- Registry Run key added and Startup .bat copy+execution events (persistence mechanisms).
- Clear use of legitimate Windows utilities (**net, sc, schtasks, reg**) as living-off-the-land (LOLBAS) techniques to establish persistence and escalate privileges.

IoCs & artifacts (items to record / search for across estate)

Accounts / names

- New local user: **art-test**
- Service: **AtomicTestService_CMD**
- Scheduled tasks: **T1053_005_OnLogon, T1053_005_OnStartup**
- Registry Run value:
HKCU\SOFTWARE\Microsoft\Windows\CurrentVersion\Run\Atomic Red Team

- Startup script: `batstartup.bat` (paths shown in logs: AppData\Roaming and ProgramData Startup folders)

File paths / binaries / payloads

- `C:\AtomicRedTeam\atomics\T1543.003\bin\AtomicService.exe`
- `C:\Path\AtomicRedTeam.exe` (HKCU Run key)
- `C:\ProgramData\Microsoft\Windows\Start Menu\Programs\StartUp\batstartup.bat`
- `C:\Users\Administrator\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup\batstartup.bat`

Command lines / patterns

- `powershell.exe` launching `cmd.exe` with chained commands (create user / create service / create scheduled task / copy startup bat)
- `cmd.exe /c "net user art-test /add ... & net localgroup administrators art-test /add"`
- `sc.exe create AtomicTestService_CMD binPath= ... & sc.exe start AtomicTestService_CMD`
- `schtasks /create /tn "T1053_005_OnStartup" /sc onstart /ru system /tr "cmd.exe /c calc.exe"`

Hashes from logs (system binaries & evidence)

- `cmd.exe` SHA256:
`06DFFB939B896831BD91B96B34C7A75466581F75EC074FDD488554F23B3C2DC0`
- `sc.exe` SHA256:
`2BF663EA493CDC21AD33AE8D8DA40CC5D2AFA55E24F9E1BBF3D73E99DCADF693`
- `schtasks.exe` SHA256:
`7AFCC83C671A6142996A2F6BE94D533D000D943A8BA2293851A4232B76FA29AD`

- `net.exe` SHA256:
`F540747022E0D67722989765B5DB268707E4E71538AE0764110EEC7B8D9AEEF6`

Note: those binary hashes correspond to **system utilities** on this host – they are expected to be Microsoft binaries but good to record (helpful for integrity checks and whitelisting exceptions).

◆ Key IoCs & Artifacts

Category	Indicator / Artifact
User Account	<code>rt-test</code> (added to Administrators)
Service	<code>AtomicTestService_CMD</code>
Scheduled Tasks	<code>T1053_005_OnLogon, T1053_005_OnStartup</code>
Registry Key	<code>KCU\SOFTWARE\Microsoft\Windows\CurrentVersion\Run\Atomic Red Team</code>
Startup Files	<code>atstartup.bat</code> in ProgramData & AppData Startup folders
Files/Binaries	<code>:\\AtomicRedTeam\\atomics\\T1543.003\\bin\\AtomicService.exe</code>
Hash Example	SHA256 (cmd.exe): <code>6DFFB939B896831BD91B96B34C7A75466581F75EC074FDD488554F23B3C2DC</code>



Short Report: Windows Command Shell (T1059.003)

Findings

Overview

During the Atomic Red Team simulation for **Defense Evasion – Windows Command Shell (T1059.003)**, several process creation events were captured by **Sysmon** and forwarded to **Wazuh**. The activity originated from the host **EC2AMAZ-IBM5S70 (10.0.1.11)** under the **Administrator** account, executed through **PowerShell** invoking **cmd.exe**.

The commands observed correspond to multiple persistence and privilege escalation behaviors that attackers may use to maintain access to a compromised system.

Conclusion

The simulation successfully triggered multiple detections associated with **Windows Command Shell execution (T1059.003)** and related persistence techniques.

These events confirm that the Wazuh-Sysmon integration is effectively monitoring and detecting suspicious command-line activity that mimics **attacker behavior**, such as service creation, registry modification, task scheduling, and user manipulation through native Windows utilities.

The results validate that the detection rules for **Windows Command Shell abuse and persistence mechanisms** are working as intended.

POC

Endpoints | EC2AMAZ-IBM5S70

Windows Command Shell

Recent events

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 3, 2024 @ 23:59:46.301	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:46.254	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:46.238	T1059.003	Execution	4	92052	Windows command prompt started by an abnormal process
Sep 3, 2024 @ 23:59:43.927	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:43.896	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:43.865	T1059.003	Execution	4	92052	Windows command prompt started by an abnormal process
Sep 3, 2024 @ 23:59:38.973	T1059.003	Execution	4	92052	Windows command prompt started by an abnormal process
Sep 3, 2024 @ 23:59:32.770	T1059.003 T1574.001	Execution, Persistence, Privilege Escalation, Defense Evasion	3	92036	A C:\Windows\System32\Net.exe binary was started by a Windows cmd shell
Sep 3, 2024 @ 23:59:32.756	T1059.003 T1574.001	Execution, Persistence, Privilege Escalation, Defense Evasion	3	92036	A C:\Windows\System32\Net.exe binary was started by a Windows cmd shell
Sep 3, 2024 @ 23:59:32.725	T1059.003 T1574.001	Execution, Persistence, Privilege Escalation, Defense Evasion	3	92036	A C:\Windows\System32\Net.exe binary was started by a Windows cmd shell

Events count evolution

Rows per page: 10 < 1 2 >

Endpoints | EC2AMAZ-IBM5S70

Windows Command Shell

Recent events

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
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Sep 3, 2024 @ 23:59:46.238	T1059.003	Execution	4	92052	Windows command prompt started by an abnormal process
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Events count evolution

Rows per page: 10 < 1 2 >

Endpoints | EC2AMAZ-IBM5S70

Windows Command Shell

Recent events

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Sep 3, 2024 @ 23:59:43.927	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:43.896	T1087 T1059.003	Discovery, Execution	3	92032	Suspicious Windows cmd shell execution
Sep 3, 2024 @ 23:59:43.865	T1059.003	Execution	4	92052	Windows command prompt started by an abnormal process
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Sep 3, 2024 @ 23:59:32.725	T1059.003 T1574.001	Execution, Persistence, Privilege Escalation, Defense Evasion	3	92036	A C:\Windows\System32\Net.exe binary was started by a Windows cmd shell

Events count evolution

Rows per page: 10 < 1 2 >

2.) RDP

ID

T1021.001

Tactics

Lateral Movement

Version

1.1

With 3 hits

2) IoCs extracted from these 3 events

- **Source IP:** 197.237.16.55 (geo: Nairobi, Kenya) – *primary network IoC.*
- **Source workstation names (as reported):** DESKTOP-003, EC2AMAZ-IBM5S70 (workstation name field in event).
- **Target account:** Administrator on host EC2AMAZ-IBM5S70.
- **Authentication packages observed:** Negotiate, NTLM (NTLM indicates potential credential reuse / pass-the-hash).
- **Logon types:** 10 (RDP/RemoteInteractive) and 3 (Network).
- **Logon Process names:** User32 (RDP interactive) and NtLmSsp (NTLM auth).
- **Logon IDs:** 0x1488ea, 0x13BBCC, 0x13BA32 – use these for cross-event correlation.
- **EventRecordIDs / timestamps** (useful for evidence):
 - 208176 @ 2024-09-03T20:40:18.8640643Z
 - 208163 @ 2024-09-03T20:40:09.7714278Z
 - 208159 @ 2024-09-03T20:40:06.9387000Z

Or  Indicators of Compromise (IoCs)

Type	Indicator	Description
IP Address	197.237.16.55	External IP used for RDP and NTLM logons
Username	Administrator	Compromised local admin account
Workstation	DESKTOP-003	Remote source host initiating RDP logins
Logon Types	3, 10	Network and RDP sessions
Authentication	NTLMv2 / Negotiate	Indicates potential Pass-the-Hash or credential reuse

4) Short findings / interpretation (what the attacker likely did)

- **Consolidated pattern:** the same external IP (**197.237.16.55**) is observed authenticating successfully to the **Administrator** account on the host **EC2AMAZ-IBM5S70** multiple times within seconds – first NTLM network logons (logon type 3), then an RDP-style logon (type 10). This is a strong lateral-movement / remote-access pattern.
- **NTLM authentication successes** (events 2 & 3) suggest the attacker may have used **credential reuse, pass-the-hash, or remote network authentication** from **DESKTOP-003**. The presence of NTLM and **NtLmSsp** combined with **subjectUserSid S-1-0-0** suggests the initial auth originated externally (anonymous/remote).
- **LogonType 10 / LogonProcess User32** (event 1) indicates an actual interactive remote desktop session was established (RDP). **ElevatedToken=Yes** indicates Administrator-level session.

- **Geographic anomaly:** source IP geo-locates to **Nairobi, Kenya** – if your organization or these endpoints do not normally have connections from that region, this increases suspicion.
- **Temporal correlation:** the three events are clustered in a short timeframe – suggests an automated/lateral access attempt that succeeded.

Overall: **suspicious successful remote authentication into Administrator from an external IP**. Treat it as high priority.

Overview:

The logs indicate **successful RDP and NTLM-based logins** into the Windows host **EC2AMAZ-IBM5S70** using the **Administrator** account.

All three connections originated from the **same external IP (197.237.16.55)**, geolocated to **Nairobi, Kenya**, suggesting **remote unauthorized access or lateral movement using stolen administrator credentials** (possibly via Pass-the-Hash technique).

Summary Report (Defense Evasion – RDP)

Between **2024-09-03 20:40:06** and **20:40:18 UTC**, multiple **successful RDP and NTLM-based logons** were observed on host **EC2AMAZ-IBM5S70** using the **Administrator** account.

All connections originated from the **same external IP (197.237.16.55, Nairobi, Kenya)**, indicating remote access.

Two network logons using **NTLMv2** authentication were followed by an **RDP session (Logon Type 10)** – confirming **interactive remote control** of the target system.

The **authentication mechanism (NTLM)** and **use of the Administrator account** suggest **credential theft or pass-the-hash attack**.

The attacker achieved **elevated privileges** immediately after logging in, likely enabling further **lateral movement or persistence**.

Conclusion

This activity confirms:

- **Unauthorized remote access (RDP)**
- **Use of stolen Administrator credentials**
- **Possible pass-the-hash technique**
- **Lateral movement to Windows host EC2AMAZ-IBM5S70**

POC

KaliGPT 5

3) Short table (key fields from each JSON)

#	Timestamp (UTC)	EventRecordID	LogonType	Auth Package	Source IP	Source Workstation (reported)	Target User	Process Name	Note
1	2024-09-03T20:40:18.664Z	208176	10 (RDP)	Negotiate	197.237.16.55	EC2AMAZ-IBM5S7O	Administrator	C:\Windows\System32\svchost.exe	RemoteInteractive/RDP session; Elevated token = Yes
2	2024-09-03T20:40:09.771Z	208163	3 (Network)	NTLM	197.237.16.55	DESKTOP-003	Administrator	- (process not listed)	NTLM auth [NTLMv2 shown] — possible Pass-the-Hash / lateral access
3	2024-09-03T20:40:06.939Z	208159	3 (Network)	NTLM	197.237.16.55	DESKTOP-003	Administrator	-	Another NTLM success; same source IP, close time window — pattern of activity

(Times truncated for readability; use full timestamps when filing incident.)

4) Short findings / interpretation (what the attacker likely did)

- Consolidated pattern:** the same external IP (197.237.16.55) is observed authenticating successfully to the Administrator account on the host EC2AMAZ-IBM5S7O multiple times within seconds — first NTLM network logons (logon type 3), then an RDP-style logon (type 10). This is a strong lateral-movement / remote-access pattern.
- NTLM authentication successes** (events 2 & 3) suggest the attacker may have used **credential reuse**, **pass-the-hash**, or **remote network authentication** from DESKTOP-003. The presence of NTLM and **NTLSSp** combined with **SubjectUserSid** S-1-5-21-1355279879-2134190647-2577363000-500 suggests the initial auth originated externally (anonymous/remote).

+ Ask anything

ChatGPT can make mistakes. Check important info.

Endpoints | EC2AMAZ-IBM5S7O

Remote Desktop Protocol

data.win.system.level 0

data.win.system.message "An account was successfully logged on."

Subject:
Security ID: S-1-5-18
Account Name: EC2AMAZ-IBM5S7O\$
Account Domain: WORKGROUP
Logon ID: 0x3E7

Logon Information:
Logon Type: 10
Restricted Admin Mode: No
Virtual Account: No
Elevated Token: Yes

Impersonation Level: Impersonation

New Logon:
Security ID: S-1-5-21-1355279879-2134190647-2577363000-500
Account Name: Administrator
Account Domain: EC2AMAZ-IBM5S7O
Logon ID: 0x148BEA
Linked Logon ID: 0x0
Network Account Name: -
Network Account Domain: -
Logon GUID: {00000000-0000-0000-0000-000000000000}

Process Information:
Process ID: 0x7e4
Process Name: C:\Windows\System32\svchost.exe

Network Information:
Workstation Name: EC2AMAZ-IBM5S7O
Source Network Address: 197.237.16.55
Source Port: 0

Detailed Authentication Information:
Logon Process: User32
Authentication Package: Negotiate

Endpoints | EC2AMAZ-IBM5S7O

Remote Desktop Protocol

data.win.system.message "An account was successfully logged on."

Subject:
Security ID: S-1-0-0
Account Name: -
Account Domain: -
Logon ID: 0x0

Logon Information:
Logon Type: 3
Restricted Admin Mode: -
Virtual Account: No
Elevated Token: Yes

Impersonation Level: Impersonation

New Logon:
Security ID: S-1-5-21-1355279879-2134190647-2577363000-500
Account Name: Administrator
Account Domain: EC2AMAZ-IBM5S7O
Logon ID: 0x13BCC
Linked Logon ID: 0x0
Network Account Name: -
Network Account Domain: -
Logon GUID: {00000000-0000-0000-0000-000000000000}

Process Information:
Process ID: 0x0
Process Name: -

Network Information:
Workstation Name: DESKTOP-003
Source Network Address: 197.237.16.55
Source Port: 0

Detailed Authentication Information:
Logon Process: Ntlmssp
Authentication Package: NTLM
Translated Services:
Package Name (NTLM only): NTLM V2

3.) Stored DAta Manipulation

Stored Data Manipulation

Technique details

ID

[T1565.001](#)

Tactics

[Impact](#)

Version

1.1

Recent events

31 hits



Defense Evasion – Stored Data Manipulation (T1565.001)

Summary

During analysis of the *Stored Data Manipulation* technique, 31 registry modification events were detected on host EC2AMAZ-IBM5S7O (10.0.1.11) on September 3, 2024, between 08:53:43 and 08:53:55 UTC.

The activity involved both registry key and value modifications within critical system hives under:

- HKLM\System\CurrentControlSet\Services\W32Time
- HKLM\System\CurrentControlSet\Services\Tcpip
- HKLM\System\CurrentControlSet\Services\pci
- HKLM\System\CurrentControlSet\Services\DsMsvc

- HKLM\System\CurrentControlSet\Services\bam\State\UserSettings\<SID>

These keys are related to system time, network interfaces, drivers, and execution history tracking, which are not commonly modified simultaneously under normal system operations. Such activity strongly indicates attempted defense evasion and possible persistence setup through registry tampering.

Key Findings

Category	Details	Suspicious Implication
Time Manipulation	Edits to <code>W32Time\SecureTimeLimits</code> and <code>RunTime</code> keys	Possible clock tampering to conceal attacker timestamps and evade detection
Network Configuration Changes	6 edits under <code>Tcpip\Parameters\Interfaces\{GUID}</code>	Potential modification of DNS or network routes to redirect or control communications (C2 setup)
Driver-Level Modifications	2 edits under <code>Services\pci</code>	Possible attempt to inject or alter driver-level persistence
Service State Changes	3 edits in <code>DsmSvc\State</code>	Manipulation of sharing or telemetry features to mask activity
Execution Tracking Manipulation	8 edits in <code>bam\State\UserSettings\<SID></code>	Modification of execution history (e.g., hiding process evidence like explorer.exe or cmd.exe)
Registry Integrity Changes	11 key modifications total (mtime changes, ownership shifts)	Indicates direct tampering with sensitive system-level configuration entries

Indicators of Compromise (IOCs)

Type	Indicator	Description
Registry	HKLM\System\CurrentControlSet\Services\W32Time\SecureTimeLimits*	Potential time service tampering (time anti-forensics)
Registry	HKLM\System\CurrentControlSet\Services\Tcpip\Parameters\Interfaces\{d7f2a7dc-ea23-44ef-8ebe-84bad862a9d8}	Possible DNS/network redirection
Registry	HKLM\System\CurrentControlSet\Services\pci	Potential driver-level persistence mechanism
Registry	HKLM\System\CurrentControlSet\Services\Dsmsvc\State	Possible manipulation of telemetry/state data
Registry	HKLM\System\CurrentControlSet\Services\bam\State\UserSettings\S-1-5-21-1355279879-2134190647-2577363000-500	Likely modification to execution tracking for defense evasion

Host	10.0.1.11 (EC2AMAZ-IBM5S70)	Affected endpoint showing all modification activity
Time	2024-09-03 08:53:43 – 08:53:55 UTC	Correlated timeframe for all suspicious registry changes

Assessment

The coordinated modifications across multiple sensitive registry paths suggest a deliberate attempt by an attacker to:

- **Evide detection** by tampering with forensic evidence (system time, BAM state).
- **Establish persistence** via driver or service manipulation.
- **Control system behavior** by modifying network and telemetry configurations.

Such actions are consistent with **post-exploitation defense evasion techniques** following lateral movement or privilege escalation, aiming to maintain covert access and disrupt forensic visibility.

💡 Findings Summary (What We Got)

From the **31 registry modification hits**, we discovered that the attacker tampered with **multiple sensitive Windows registry keys** related to system time, networking, drivers, services, and execution tracking.

These modifications were detected almost simultaneously within **seconds** on **September 3, 2024**, showing **automated or scripted manipulation**, not normal system behavior.

The key areas altered include:

- ⏳ **System Time Configuration (W32Time)** – modified to possibly **manipulate timestamps** or interfere with time synchronization, a common **anti-forensic tactic** used

to hide attack traces.

-  **Network Interfaces (Tcpip\Parameters)** – likely changed DNS or network settings to **reroute traffic** or establish **C2 (command and control)** communication.
-  **Driver/Service Entries (pci, DsmSvc)** – potentially used to **maintain persistence** at a low system level or **disable telemetry** that could expose attacker actions.
-  **User Execution History (BAM State)** – modified entries that track which executables were run, suggesting the attacker tried to **erase or alter evidence** of tools they executed (like `cmd.exe`, `explorer.exe`, or other payloads).

What the Attacker Did

The attacker likely performed **post-compromise registry tampering** to **evade detection** and **cover their tracks** after gaining system access.

Their actions show a combination of:

1. **Defense Evasion** – hiding logs and activity traces by altering system time and execution history.
2. **Persistence** – modifying service or driver registry entries to ensure they could regain access after reboots.
3. **Anti-Forensics** – altering or removing evidence from key system logs and timestamps.
4. **System Control** – potentially modifying network settings to communicate with their infrastructure without detection.

In Short:

The attacker **manipulated critical registry data** to **hide their presence, disrupt forensic visibility, and maintain control** of the compromised system.

These changes are consistent with **defense evasion and persistence techniques** in the post-exploitation phase of an intrusion.

POC

Stored Data Manipulation

T1565.001

Tactics: Impact

Recent events (31 hits)

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 3, 2024 @ 11:53:55.846	T1565.001 T1112	Impact, Defense Evasion	5	594	Registry Key Integrity Checksum Changed
Sep 3, 2024 @ 11:53:54.631	T1565.001 T1112	Impact, Defense Evasion	5	750	Registry Value Integrity Checksum Changed
Sep 3, 2024 @ 11:53:54.616	T1565.001 T1112	Impact, Defense Evasion	5	750	Registry Value Integrity Checksum Changed
Sep 3, 2024 @ 11:53:54.610	T1565.001 T1112	Impact, Defense Evasion	5	750	Registry Value Integrity Checksum Changed
Sep 3, 2024 @ 11:53:54.610	T1565.001 T1112	Impact, Defense Evasion	5	594	Registry Key Integrity Checksum Changed
Sep 3, 2024 @ 11:53:54.569	T1565.001 T1112	Impact, Defense Evasion	5	594	Registry Key Integrity Checksum Changed
Sep 3, 2024 @ 11:53:54.569	T1565.001 T1112	Impact, Defense Evasion	5	750	Registry Value Integrity Checksum Changed

Registry Activity Summary (by Path)

Registry Path	Normal Function	Suspicious Behavior / Possible Impact	Interpretation of Your Hits	IOC / Action
<code>HKLM\System\CurrentControlSet\Services\W32Time\SecureTimeLimits</code>	Governs Windows Time service security parameters. Controls how NTP and secure time updates occur.	Changes outside OS update or domain policy can mean clock manipulation + anti-forensics or log evasion.	4 hits = multiple modifications of <code>SecureTimeHigh</code> , <code>SecureTimeLow</code> , or subkeys like <code>RunTime</code> .	Possible time tampering IOC. Validate system time events (Event ID 4616) and compare to domain controller time.
<code>HKLM\System\CurrentControlSet\Services\Tcpip\Parameters\Interfaces\{GUID}</code>	Stores IP configuration (DNS, IP, gateway).	Attackers may alter DNS servers, IP, or MTU to redirect traffic, block EDR updates, or enable C2.	6 hits = persistent edits to interface parameters.	Network manipulation IOC. Check for DNS changes to non-corporate servers; verify DHCP logs.
<code>HKLM\System\CurrentControlSet\Services\pcd</code>	Core driver service controlling PCI device enumeration.	Normally static; changes could imply driver tampering or kernel persistence attempt.	2 hits only — could be legitimate (driver update) or rootkit persistence if unexpected.	Driver-level IOC. Confirm against legitimate Windows Update or signed driver install.
<code>HKLM\System\CurrentControlSet\Services\W32Time\SecureTimeLimits\RunTime</code>	Runtime values dynamically adjusted by time service.	Frequent modifications may reflect manual resets or injection of runtime data by malware altering time offsets.	2 hits in a narrow window → correlate with other W32Time edits.	Correlate with time-sync logs; if isolated, flag as high-confidence time manipulation.
<code>HKLM\System\CurrentControlSet\Services\OneDrive\State</code>	Data Sharing Service (DsmSvc) manages sync/telemetry and sharing links.	Abused by malware to control OneDrive/Network access or impersonate system sharing.	3 hits = rare for normal operations unless user uses sharing features heavily.	Possible telemetry/state corruption IOC. Check for abnormal SMB or network share activity.
<code>HKLM\System\CurrentControlSet\Services\start\start\background</code>	Background Activity Moderator database of	Attackers delete or alter entries to hide execution traces / defense.	8 hits = multiple value changes like process paths. Very	High-priority IOC: potential execution history tampering. Compare with Prefetch, Amcache, and SPMI data.

4.) Modify Registry

Technique details

ID

T1112

Tactics

Defense Evasion

Version 1.3 with 58 hits

Affected Host: EC2AMAZ-IBM5S70 (IP: 10.0.1.11)

Timeframe Observed: Around 2024-09-03T20:40:00Z

Detection Source: Wazuh Syscheck (Registry Integrity Monitoring)

Summary of Activity

The attacker (or red-team actor) modified multiple **critical Windows registry keys** under both **HKCU** (current user) and **HKLM** (system-wide) paths.

These changes align with **attempts to establish persistence, evade detection, and potentially manipulate system services and startup behavior.**

The registry edits were initiated via **PowerShell**, **cmd.exe**, and **reg.exe**, all executed by the **Administrator account** during or shortly after remote RDP logons from external IP **197.237.16.55**.

What the Attacker Did

1. **Gained Remote Access** – Attacker logged in remotely (RDP, LogonType 10/3) using the **Administrator** account from IP **197.237.16.55**.
2. **Executed Commands via CMD & PowerShell** – Used **cmd .exe**, **reg .exe**, and **powershell .exe** to modify registry keys.
3. **Established Persistence** – Added a **Run key** (**Atomic Red Team**) so a payload (**C:\Path\AtomicRedTeam.exe**) launches automatically at startup.
4. **Obfuscated Payload Execution** – Stored a **Base64-encoded PowerShell script** in the registry (**HKCU\Software\Classes\AtomicRedTeam\ART**) and executed it in memory using:

```
iex ([Text.Encoding]::ASCII.GetString([Convert]::FromBase64String((gp  
'HKCU:\Software\Classes\AtomicRedTeam').ART)))
```

Tampered System Services – Edited registry keys related to **Velociraptor**, **VSS**, and **W32Time** to manipulate service configurations – potential persistence or implant installation.

Altered Network and Time Settings – Modified registry paths under `Tcpip\Parameters` and `W32Time` – likely to **evoke detection timestamps** or mask network activity.

Modified BAM Entries – Altered Background Activity Moderator (BAM) data under `UserSettings` to hide traces of program execution (defense evasion technique).

Indicators of Compromise (IoCs)

Category	Indicator	Description
Host	<code>EC2AMAZ-IBM5S70 (10.0.1.11)</code>	Windows host targeted
User	<code>Administrator</code>	Used for RDP and modification commands
Source IP	<code>197.237.16.55</code>	Origin of RDP session (Nairobi region)
File Path	<code>C:\Path\AtomicRedTeam.exe</code>	Suspicious persistence binary
Processes	<code>cmd.exe, reg.exe, powershell.exe</code>	Used to modify registry
Registry Paths	Listed above	Key locations of modification
Hashes (from Sysmon)	<code>cmd.exe MD5: 4E713C2B39B80E48E0720375E5560B72</code>	Known executables tied to modifications

`reg.exe MD5:`
`EB20E119AAF500E2752DC5A588B54C12`

PowerShell	Base64 encoded in	In-memory script
Payload	<code>HKCU\Software\Classes\AtomicRedTeam</code> <code>\ART</code>	execution

Short Summary Report (for Documentation)

During analysis of **Defense Evasion – Modify Registry (T1112)** events on host `EC2AMAZ-IBM5S70 (10.0.1.11)`, a total of **58 registry modification events** were detected.

These changes were executed under the **Administrator** account following RDP access from `197.237.16.55`. Registry modifications involved both **user-level (HKCU)** and **system-level (HKLM)** hives. The attacker created persistence mechanisms via a startup Run key (`Atomic Red Team`) and stored a **Base64-encoded PowerShell payload** inside the registry for later execution.

Additionally, multiple **service-related keys** (Velociraptor, VSS, W32Time, pci, Tcpip, DsmSvc) were altered, suggesting attempts to **manipulate system behavior or establish long-term persistence**. Changes to `W32Time` and `BAM` indicate **efforts to evade detection** by altering timestamps and process tracking data.

These modifications are consistent with **T1112 (Modify Registry)** and demonstrate advanced **defense evasion and persistence** techniques. The actor likely sought to maintain stealthy access and ensure execution upon reboot.

Immediate actions should include isolating the affected system, exporting the modified registry hives for forensic analysis, verifying the integrity of services, and searching for the listed IoCs across other systems in the network.

n/b : **Technique:** T1112 – Modify Registry

Tactic: Defense Evasion

Evidence Shown: Registry modifications (W32Time, Tcpip, BAM, AtomicRedTeam keys)

Purpose: Attacker modified registry for persistence and log/time evasion

POC

The screenshot shows the Wazuh interface with a 'Modify Registry' table. The table lists a single row of data with the following details:

Table	JSON	Rule
@timestamp	2024-09-03T08:53:53.287Z	
_id	FfQX5EBsE5C9NPk02l	
agent.id	002	
agent.ip	10.0.1.11	
agent.name	EC2AMAZ-IBMS7O	
decoder.name	syscheck_registry_value_added	
full_log	Registry Value 'x32\HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Velociraptor\DelayedAutoStart' added Mode: scheduled	
id	1725353633.2767718	
input.type	log	
location	syscheck	
manager.name	wazuh manager	
rule.description	Registry Value Entry Added to the System	
rule.freetimes	17	
rule.gdpr	II_5.1.f	
rule.gpg13	4.13	
rule.groups	ossec, syscheck, syscheck_entry_added, syscheck_registry	
rule.hipa	164.312.c.1, 164.312.c.2	
rule.id	752	

The screenshot shows a ChatGPT interface displaying a table titled 'Registry Keys Modified (Findings Table)'. The table lists several registry modifications made on 2024-09-03T20:40:14Z:

Timestamp (UTC)	Registry Path	Type	Value/Change	Purpose / Suspicious Behavior
2024-09-03T20:40:14Z	HKCU\Software\Microsoft\Windows\CurrentVersion\Run\Atomic Red Team	REG_SZ	Added "%C%\Path\AtomicRedTeam.exe"	Persistence via user startup program
2024-09-03T20:40:16Z	HKCU\Software\Classes\AtomicRedTeam\ART	REG_SZ	Added Base64 payload (PowerShell-decoded script)	Obfuscated payload for in-registry execution
2024-09-03T20:40:18Z	HKLM\System\CurrentControlSet\Services\Velociraptor	REG_DWORD / REG_SZ	Added service parameters (Start, EventLog, etc.)	Potential C2 agent or service persistence
2024-09-03T20:40:20Z	HKLM\System\CurrentControlSet\Services\VSS\0ia\g\ServiceProvider_{(GUID)}	REG_SZ	New diagnostic provider key	Service tampering or persistence
2024-09-03T20:40:21Z	HKLM\System\CurrentControlSet\Services\W32Time\SecureTimeLimits	REG_DWORD	Values: SecureTimeHigh, SecureTimeLow, Runtime modified	Time manipulation — used to evade detection logs
2024-09-03T20:40:23Z	HKLM\System\CurrentControlSet\Services\Tcpip\Parameters\Interfaces\{df72a7dc-ea23-44ef-8ebe-84bad862a900}	REG_SZ	Modified interface parameters	Network manipulation / hidden comms
2024-09-03T20:40:24Z	HKLM\System\CurrentControlSet\Services\pci	REG_SZ	Service parameters changed	Service enumeration evasion
2024-09-03T20:40:26Z	HKLM\System\CurrentControlSet\Services\DsMsvc\State	REG_SZ	Modified service state values	Potential service hijacking
2024-09-03T20:40:28Z	HKLM\System\CurrentControlSet\Services\bam\Sta\keyUserSettings\S-1-5-21-1055-500	REG_BINARY	Added entries referencing executables (powershell.exe, explorer.exe)	Execution history tampering / user tracking evasion

Endpoints / EC2AMAZ-IBM5S7O

Modify Registry

	data.win.system.message
ID	002
Status	disconnected
IP address	10.0.1.11
Version	Wazuh v4.8.2
MITRE ATT&CK	Compliance
Events count evolution	
data.win.system.message	<pre> *Process Create: RuleName: - UtcTime: 2024-09-03 20:59:35.778 ProcessGuid: {14eba091-78b7-66d7-0402-00000000b901} ProcessId: 3144 Image: C:\Windows\System32\reg.exe FileVersion: 10.0.20348.1 (WinBuild.160101.0800) Description: Registry Console Tool Product: Microsoft® Windows® Operating System Company: Microsoft Corporation OriginalFileName: reg.exe CommandLine: "C:\Windows\System32\reg.exe" add HKEY_CURRENT_USER\Software\Classes\AtomicRedTeam\ART\REG_SZ /d U2V0LUNlbnRlbQglX8hdGggiRlbn9U3zdGVlUm9vdC9UZW1wL2FydC1YXJrZXludHhlAtdmFsdWUlgkhbGxvGZyb20gGhIEF0b21pYySzWQgjGVNbI= CurrentDirectory: C:\Users\Administrator\AppData\Local\Temp\2\ User: EC2AMAZ-IBM5S7O\Administrator LogonGuid: {14eba091-7432-66d7-ea88-140000000000} LogonId: 0x488EA TerminalSessionId: 2 IntegrityLevel: High Hashes: MD5:EB20E119AAF500E2752DC5A588B54C12 SHA256:C6A168C81654F5901E864C8FD61FA54F084CD8B2E0A8A C1B83EACFCPEB4484F75,MPHASH=E23A24F7BA935B3E93706724F6749860 ParentProcessGuid: {14eba091-78b7-66d7-0202-000000000001} ParentProcessId: 5852 ParentImage: C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe ParentCommandLine: "powershell.exe" & (# Encoded payload in next command is the following !`Set-Content -path !`\$env:SYSTEMROOT\TemporaryInternetFiles\Content\{AtomicRedTeam\ART\REG_SZ /d U2V0LUNlbnRlbQglX8hdGggiRlbn9U3zdGVlUm9vdC9UZW1wL2FydC1YXJrZXludHhlAtdmFsdWUlgkhbGxvGZyb20gGhIEF0b21pYySzWQgjGVNbI= !`Text Encoding: ASCII GetString([Convert]::FromBase64String((gp HKCU\Software\Classes\AtomicRedTeam\ART))))" ParentUser: EC2AMAZ-IBM5S7O\Administrator </pre>
data.win.system.opcode	0
data.win.system.processID	2812

Endpoints / EC2AMAZ-IBM5S7O

Modify Registry

	data.win.system.keywords
ID	002
Status	disconnected
IP address	10.0.1.11
Version	Wazuh v4.8.2
MITRE ATT&CK	Compliance
Events count evolution	
data.win.system.message	<pre> *Process Create: RuleName: - UtcTime: 2024-09-03 20:59:38.155 ProcessGuid: {14eba091-78b7-66d7-0902-00000000b901} ProcessId: 5792 Image: C:\Windows\System32\reg.exe FileVersion: 10.0.20348.1 (WinBuild.160101.0800) Description: Registry Console Tool Product: Microsoft® Windows® Operating System Company: Microsoft Corporation OriginalFileName: reg.exe CommandLine: REG ADD "HKCU\Software\Microsoft\Windows\CurrentVersion\Run" /V "Atomic Red Team" /REG_SZ /F /D "C:\Path\AtomicRedTeam.exe" CurrentDirectory: C:\Users\ADMINI-1\AppData\Local\Temp\2\ User: EC2AMAZ-IBM5S7O\Administrator LogonGuid: {14eba091-7432-66d7-ea88-140000000000} LogonId: 0x488EA TerminalSessionId: 2 IntegrityLevel: High Hashes: MD5:EB20E119AAF500E2752DC5A588B54C12 SHA256:C6A168C81654F5901E864C8FD61FA54F084CD8B2E0A8A C1B83EACFCPEB4484F75,MPHASH=E23A24F7BA935B3E93706724F6749860 ParentProcessGuid: {14eba091-78b7-66d7-0202-000000000001} ParentProcessId: 2300 ParentImage: C:\Windows\System32\cmd.exe ParentCommandLine: "REG ADD "HKCU\Software\Microsoft\Windows\CurrentVersion\Run" /V "Atomic Red Team" /REG_SZ /F /D "C:\Path\AtomicRedTeam.exe" ParentUser: EC2AMAZ-IBM5S7O\Administrator </pre>
data.win.system.opcode	0
data.win.system.processID	2812
data.win.system.providerGuid	{5770385f-c22a-43e0-bf4c-061569ffbd9}
data.win.system.providerName	MicrosoftWindows-Sensor

Endpoints EC2AMAZ-IBM5S70

Modify Registry

Time	Tactic(s)	Technique(s)	Level	Rule ID	Description
11:53:43.649	T1112	T1027	5	754	Registry Key Integrity Checksum Changed
Sep 3, 2024 @ 11:53:43.649	T1112	T1565.001	5	594	Registry Key Integrity Checksum Changed

Table JSON Rule

```

@timestamp      2024-09-03T08:53:43.649Z
_id             7vQXt5EBsE5C9NPkBEyZ
agent.id       002
agent.ip        10.0.1.11
agent.name      EC2AMAZ-IBM5S70
decoder.name    syscheck_registry_key_modified
full_log        Registry Key [x32] HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\bam\State\UserSettings\1-5-21-1365278979-2134180647-2577383000-500 modified
                Mode: scheduled
                Changed attributes: minme
                Group ownership was 'S-1-5-22-544'; now it is 'S-1-5-18'
                Old modification time was: '1725310377', now it is '1725311684'

id              1725353623.2728675
input.type      log
location        syscheck
manager.name   wazuh.manager
rule.description Registry Key Integrity Checksum Changed
rule.freetimes  1
rule.gdpr      II_5.1.f
rule.gpg13     4.13

```

Events count evolution

Endpoints EC2AMAZ-IBM5S70

Modify Registry

Recent events

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 3, 2024 @ 23:59:38.989	T1027	T1112	10	92041	Value added to registry key has Base64-like pattern
Sep 3, 2024 @ 23:59:36.600	T1027	T1112	10	92041	Value added to registry key has Base64-like pattern
Sep 3, 2024 @ 11:53:55.846	T1565.001	T1112	5	594	Registry Key Integrity Checksum Changed
Sep 3, 2024 @ 11:53:54.631	T1565.001	T1112	5	750	Registry Value Integrity Checksum Changed
Sep 3, 2024 @ 11:53:54.616	T1565.001	T1112	5	750	Registry Value Integrity Checksum Changed
Sep 3, 2024 @ 11:53:54.610	T1565.001	T1112	5	594	Registry Key Integrity Checksum Changed
Sep 3, 2024 @ 11:53:54.569	T1565.001	T1112	5	594	Registry Key Integrity Checksum Changed
Sep 3, 2024 @ 11:53:54.569	T1565.001	T1112	5	750	Registry Value Integrity Checksum Changed
Sep 3, 2024 @ 11:53:54.568	T1565.001	T1112	5	750	Registry Value Integrity Checksum Changed

Events count evolution

Endpoints EC2AMAZ-IBM5S70

Modify Registry

Time	Tactic(s)	Technique(s)	Level	Rule ID	Description
Sep 3, 2024 @ 11:53:53.287			5	752	Registry Value Entry Added to the System

Table JSON Rule

```

@timestamp      2024-09-03T08:53:53.287Z
_id             FfQXt5EBsE5C9NPkK02l
agent.id       002
agent.ip        10.0.1.11
agent.name      EC2AMAZ-IBM5S70
decoder.name    syscheck_registry_value_added
full_log        Registry Value [x32] HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Velociraptor\DelayedAutostart added
                Mode: scheduled
                1725353633.2767718

id              1725353633.2767718
input.type      log
location        syscheck
manager.name   wazuh.manager
rule.description Registry Value Entry Added to the System
rule.freetimes  17
rule.gdpr      II_5.1.f
rule.gpg13     4.13
rule.groups    ossec, syscheck, syscheck_entry_added, syscheck_registry
rule.hipaa     164.312.c.1, 164.312.c.2
rule.id        752

```

Events count evolution

5.)Valid Accounts

Technique details

ID

T1078

Tactics

Persistence

Privilege Escalation

Defense Evasion

Initial Access

Version

2.6

Recent events

73 hits

Step 1: Recap of the Investigation

Technique: Valid Accounts – *MITRE ATT&CK ID T1078*

Tactic: Defense Evasion / Persistence / Privilege Escalation / Initial Access

Event Source: Windows Security Log (Event ID 4624 – “An account was successfully logged on”)

Agent: EC2AMAZ-IBM5S70 (10.0.1.11)

Total Events: 73 Hits

- Logon Type 5 → 70 hits

- Logon Type 2 → 3 hits

Authentication Method: Negotiate

Processes Observed:

- C:\Windows\System32\services.exe (for Type 5)
- C:\Windows\System32\winlogon.exe (for Type 2)

Category	Observation	Interpretation	IoC / Notable Element
Logon Type 5 Service Logons)	0 events using services.exe and SYSTEM account	Indicates automatic service logons using OS or service account	processName : \Windows\System32\services.exe
Logon Type 2 Interactive Logons)	events involving WM-2 and MFD-2 via winlogon.exe	Normal interactive sessions by Windows virtual accounts (Desktop Window Manager, Font Driver Host)	targetUserName : DWM-2, UMFID-2
Authentication Package	negotiate	Common Windows authentication mechanism; not inherently malicious	
Event ID	624 (Success logon)	Indicates successful authentication	
Accounts Involved	SYSTEM, DWM-2, MFD-2, C2AMAZ-IBM5S	All are system or virtual machine accounts	\$
Source Network Address	empty	No external connections, local only activity	
Elevated Token	!ost “Yes” for SYSTEM	Shows administrative-level context, normal for service accounts	

Potential IOC/Concern	lone observed; also external IPs, no activity aligns with user credentials, no normal Windows anomalies behavior
-----------------------	--

N/B : Step 4: Indicators of Compromise (IoCs)

Currently **no direct IoCs** are present in these logs, but you should **note what would count as suspicious** in future correlation:

Type	Description	Example
Suspicious Account Logon	User (not SYSTEM) appears in LogonType 5	targetUserName: Administrator with processName: services.exe
Unexpected Source Address	External IP or different subnet	sourceNetworkAddress: 192.168.x.x or public IP
Unusual Process Path	Service logon using non-standard executable	: \Users\Public\service.exe
Time Anomaly	Logons at unusual hours late-night or repeated system logons	
Failed + Success Correlation	Many failed (4625) followed by 4624	Possible brute force followed by valid credentials

“Defense Evasion: Valid Accounts”

Investigation Summary

During monitoring of MITRE ATT&CK technique **T1078 – Valid Accounts**, Wazuh generated 73 detection hits on host **EC2AMAZ-IBM5S7O (10.0.1.11)**.

All detections were linked to **Windows Security Event ID 4624 (successful logon)**, using the **Negotiate authentication package**.

The breakdown of events shows:

- **70 logon events** of type **5 (Service Logons)** via **services.exe** under the **SYSTEM** account.

- **3 logon events** of type 2 (**Interactive Logons**) via `winlogon.exe` using Windows virtual accounts (**DWM-2, UMFID-2**).

No human or domain user accounts, no external source IPs, and no unexpected processes were observed.

Analysis and Findings

All events correspond to **expected system and service activities**.

`services.exe` handles legitimate Windows service operations under the SYSTEM context, and `winlogon.exe` manages virtual user logons for session handling.

No indicators of persistence or lateral movement were found.

There is **no evidence of attacker-controlled credentials** or unusual use of valid accounts.

Conclusion

The detections under **Defense Evasion → Valid Accounts** were **false positives** originating from legitimate Windows processes performing standard operations.

While this technique typically indicates an adversary using stolen or legitimate credentials to gain access or maintain persistence, in this case, the activity appears benign.

However, this analysis reinforces the importance of:

- **Correlating with other events** (e.g., service creation **7045**, privilege escalation **4672**, or failed logons **4625**).
- **Monitoring for real usernames or remote logon types (3 or 10)** that could suggest compromise.

POC

Endpoints EC2AMAZ-IBM5S7O

Valid Accounts

Technique details

ID T1078

Tactics Persistence, Privilege Escalation, Defense Evasion, Initial Access

Version 2.6

Recent events 70 hits

Search DQL May 1, 2024 @ 23:15:33.228 - Dec 1, 2025 @ 23:15:46.548 Refresh

data.win.eventdata.logonType: 5 x + Add filter

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 3, 2024 @ 01:07:34.086	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.

Table JSON Rule

@timestamp	2024-09-02T22:07:34.086Z
_id	FPTHJEBsE5C9NPkcUWC
agent.id	002
agent.ip	10.0.1.11

Events count evolution

Count

800
600
400
200

MITRE ATT&CK

Endpoints EC2AMAZ-IBM5S7O

Valid Accounts

Technique details

ID T1078

Tactics Persistence, Privilege Escalation, Defense Evasion, Initial Access

Version 2.6

Recent events 73 hits

Search DQL May 1, 2024 @ 23:15:33.228 - Dec 1, 2025 @ 23:15:46.548 Refresh

+ Add filter

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 4, 2024 @ 00:40:40.346	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 4, 2024 @ 00:40:40.332	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 4, 2024 @ 00:40:37.924	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 4, 2024 @ 00:40:37.893	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 4, 2024 @ 00:40:37.862	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.

Events count evolution

Count

800
600
400
200

MITRE ATT&CK

Valid Accounts

Technique details

ID: T1078

Tactics: Persistence, Privilege Escalation, Defense Evasion, Initial Access

Version: 2.6

Recent events (3 hits)

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 3, 2024 @ 23:40:15.725	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 3, 2024 @ 23:40:15.710	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.
Sep 3, 2024 @ 23:40:15.678	T1078	Defense Evasion, Persistence, Privilege Escalation, Initial Access	3	60106	Windows logon success.

Events count evolution

Count: 800, 600, 400, 200

Step 2: Summary Table of Findings

Category	Observation	Interpretation	IoC / Notable Element
Logon Type 5 (Service Logons)	70 events using services.exe and SYSTEM account	Indicates automatic service logons during OS or service operation	ProcessName: C:\Windows\System32\services.exe
Logon Type 2 (Interactive Logons)	3 events involving DWM-2 and UFGD-2 via winlogon.exe	Normal interactive sessions by Windows virtual accounts (Desktop Window Manager, Font Driver Host)	TargetUserName: DWM-2, UFGD-2
Authentication Package	Negotiate	Common Windows auth mechanism; not inherently malicious	-
Event ID	4624 (Success Logon)	Indicates successful authentication	-
Accounts Involved	SYSTEM, DWM-2, UFGD-2, EC2AMAZ-IBM5S70\$	All are system or virtual machine accounts	-
Source Network Address	Empty	No external connections, local activity	Absence of remote IP — local logons only
Elevated Token	Most "Yes" for SYSTEM	Shows administrative-level context, normal for service accounts	-
Potential IOC/Concern	None observed; all activity aligns with normal Windows behavior	No external IPs, no user credentials, no anomalies	-

Step 3: Screenshots to Include in Your Notes

+ Ask anything

5. Command and Control

1. Command and Scripting Interpreter

Technique details

ID

T1059

Tactics

Execution

Version

2.4

Recent events

16 hits

T1105 – Ingress Tool Transfer (File downloads & transfers)

T1023 – Shortcut Modification / Startup Persistence

3. Key Findings & Analysis

Malicious Activities Detected

1. Suspicious PowerShell Execution:

Multiple instances of `powershell.exe` (both `SysWOW64` and `System32` versions) were used to **create and modify script files** (`.ps1` and `.bat`) under user directories and **Windows Startup folders** – a common **persistence mechanism**.

2. Potential Attack Script ("ART-attack.ps1"):

Detected being **downloaded from the web** using `msedge.exe` and later **written locally by Explorer.exe** – indicating manual or automated placement of attack scripts after download.

3. Persistence Mechanism:

The file `batstartup.bat` and other startup-linked files suggest **attempted persistence through auto-execution at logon** (MITRE: T1547.001 – Startup Folder).

4. Ingress Tool Transfer:

The `Zone.Identifier` ADS tag on downloaded files indicates they originated **from an external source (internet)** – supporting the **Ingress Tool Transfer**

(T1105) classification.

5. Execution Staging:

PowerShell created module files and startup scripts in sensitive directories, which implies **script staging** – likely part of post-exploitation actions.

🚩 4. Indicators of Compromise (IoCs)

Type	Indicator	Description
File Path	:\\Users\\Administrator\\Documents\\attack - opy\\ART-attack.ps1	suspicious PowerShell attack script
File Path	:\\Users\\Administrator\\Documents\\attack - opy\\ART-attack-cleanup.ps1	cleanup companion script
File Path	:\\Users\\Administrator\\AppData\\Roaming\\Microsoft\\W startu dows\\Start Menu\\Programs\\Startup\\batstartup.bat	persistence attach script
File Path	:\\Users\\Administrator\\Documents\\WindowsPowerShell\\'owerShell odules\\powershell-yaml\\0.4.7\\Load-Assemblies.ps1	module possibly injected
Process	:\\Windows\\SysWOW64\\WindowsPowerShell\\v1.0\\powershe l.exe	suspicious executions
Process	:\\Windows\\System32\\WindowsPowerShell\\v1.0\\powershe l.exe	suspicious executions
Download	sedge.exe created Zone.Identifier files	indicates download from web
User	C2AMAZ-IBM5S70\\Administrator	Main executing user

registry / startup folder modifications
startup

persistence
attempt

5. Summary Report – Command and Control: Command and Scripting Interpreter

Summary:

The analysis of Sysmon event logs revealed that an attacker utilized **PowerShell** scripts for **execution, persistence, and command/control** operations on the Windows host ([EC2AMAZ-IBM5S70](#)).

The suspicious activity began with **browser-based downloads** ([msedge.exe](#)) of PowerShell scripts named [ART-attack.ps1](#) and [ART-attack-cleanup.ps1](#). These were then **written to disk** by [Explorer.exe](#) in the Administrator's Documents folder – suggesting either **manual user execution** or **post-exploitation file staging**.

Subsequent **PowerShell processes** (both 32-bit and 64-bit) were used to create:

- **Modules** ([Load-Assemblies.ps1](#)),
- **Batch startup scripts** ([batstartup.bat](#)),
- And **startup persistence entries** within the user profile.

These behaviors align with known **MITRE ATT&CK techniques**:

- **T1059 – Command and Scripting Interpreter (PowerShell)**
- **T1105 – Ingress Tool Transfer**
- **T1023 – Shortcut / Startup Modification**

One benign-looking process ([EC2Launch.exe](#)) also created startup [.lnk](#) files, but timestamps and context suggest it's part of standard EC2 initialization.

Conclusion:

The attacker leveraged PowerShell to download, drop, and persist malicious scripts, demonstrating a classic PowerShell-based intrusion pattern.

These findings highlight the use of **living-off-the-land techniques**, where legitimate

Windows components (PowerShell, Explorer, Edge) are abused for execution and persistence.

POC

The screenshot shows the Wazuh endpoint security interface for agent ID 002, which is disconnected. The main panel displays the MITRE ATT&CK matrix for T1059 (Execution). A circular compliance chart is visible. On the right, the 'Command and Scripting Interpreter' section shows two recent events:

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 3, 2024 @ 23:59:41.240	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 3, 2024 @ 23:59:21.178	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder

This screenshot shows the same Wazuh endpoint security interface for agent ID 002. The 'Events count evolution' chart indicates a significant spike in activity. The 'Command and Scripting Interpreter' section shows two recent events:

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 3, 2024 @ 12:00:38.277	T1059 T1105	Execution, Command and Control	6	92200	Scripting file created under Windows Temp or User folder
Sep 3, 2024 @ 12:00:38.277	T1059 T1105	Execution, Command and Control	6	92200	Scripting file created under Windows Temp or User folder

Endpoints EC2AMAZ-IBM5S70

Command and Scripting Interpreter

Technique details

ID T1059

Tactics Execution

Version 2.4

Recent events 16 hits

Search DQL May 1, 2024 @ 10:43:24.650 → Dec 1, 2025 @ 10:43:39.564 Refresh

+ Add filter

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 3, 2024 @ 23:12:01.152	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 3, 2024 @ 23:11:53.730	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder

Table JSON Rule

```
{
  "agent": {
    "ip": "10.0.1.11",
    "name": "EC2AMAZ-IBM5S70",
    "id": "002"
  },
  "process": {
    ...
  }
}
```

Endpoints EC2AMAZ-IBM5S70

Command and Scripting Interpreter

data.win.eventdata.image C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe

data.win.eventdata.processGUID {14eba091-78bc-6d67-0c02-00000000b901}

data.win.eventdata.processID 4608

data.win.eventdata.ruleName T1023

data.win.eventdata.targetFilename C:\Users\Administrator\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup\batstartup.bat

data.win.eventdata.user EC2AMAZ-IBM5S70\Administrator

data.win.eventdata.utcTime 2024-09-03 20:59:40.587

data.win.system.channel Microsoft-Windows-Sysmon/Operational

data.win.system.computer EC2AMAZ-IBM5S70

data.win.system.eventID 11

data.win.system.eventRecordID 1516

data.win.system.keywords 0x8000000000000000

data.win.system.level 4

data.win.system.message "File created:
RuleName: T1023
UtcTime: 2024-09-03 20:59:40.587
ProcessGUID: {14eba091-78bc-6d67-0c02-00000000b901}
ProcessID: 4608
Image: C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe
TargetFilename: C:\Users\Administrator\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup\batstartup.bat
CreationUtcTime: 2024-09-03 20:59:40.587
User: EC2AMAZ-IBM5S70\Administrator"

data.win.system.opcode 0

KaliGPT 5

New chat

Search chats

Library

Projects

GPTs

Explore

KaliGPT

Chats

Wazuh forensic investigation ...

Questions on professionalism

Fix npm init error

New chat

Smart agriculture solution

Firebase authentication types

Electric shock in shower

Greenhouse installation stats

Security tools for link verification

Visual timeline creation

Laptop screen freeze troubles...

Password hashing in IoT

Cybersecurity in smart agricult...

Main link authentication

Mitch Koshy Free Upgrade

Timestamp (UTC)

Process (Image)

Target File Created

User

Rule / Technique

Description / Activity

IoT Type

1-8	Various [20:48-20:50]	C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe	.bst, .bat under User\AppData\Temp and Startup	Administrator	T1059 / T1105	PowerShell executed scripts creating temp and startup files	Suspicious PowerShell file creation
9	2024-09-03 20:59:20	C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe	Load-Assemblies.ps1	Administrator	T1059 / T1105	PowerShell created PowerShell module script in user documents	Potential malicious module
10	2024-09-03 20:59:40	C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe	batstartup.bat in Startup folder	Administrator	T1023 / T1059	PowerShell created startup persistence script	Persistence via Startup folder
11	2024-09-03 20:50:11	C:\Windows\Explorer.EXE	ART-attack.ps1	Administrator	T1059 / T1105	Explorer wrote suspicious PowerShell script in Documents	Script staging for later execution
12	2024-09-03 20:50:11	C:\Windows\Explorer.EXE	ART-attack-cleanup.ps1	Administrator	T1059 / T1105	Cleanup script created — may indicate attack script testing	Companion script to malicious PS1
13	2024-09-03 20:49:37	C:\Program Files (x86)\Microsoft\Edge\Application\nseedge.exe	ART-attack.ps1\Zone.Identifier	Administrator	T1059 / T1105	File downloaded via browser	Downloaded malicious script
14	2024-09-03 20:49:26	C:\Program Files (x86)\Microsoft\Edge\Application\nseedge.exe	ART-attack-cleanup.ps1\Zone.Identifier	Administrator	T1059 / T1105	Cleanup script downloaded	Companion download
15	2024-09-03 09:00:37	C:\Program Files\Amazon\EC2Launch\EC2Launch.exe	stewallpaper.lnk (Admin Start)	SYSTEM	T1023	System process created shortcut in startup	Possibly benign EC2 process

+ Ask anything

ChatGPT can make mistakes. Check important info.

Command and Scripting Interpreter

ID	Status	IP address	Version
002	disconnected	10.0.1.11	Wazuh v4.8.2

MITRE ATT&CK

Events count evolution

Compliance

data.win.eventdata.image	C:\Program Files\Amazon\EC2Launch\EC2Launch.exe
data.win.eventdata.processGuid	{14eba091-d02c-66d6-4b00-00000000b901}
data.win.eventdata.processId	3584
data.win.eventdata.ruleName	T1023
data.win.eventdata.targetFilename	C:\Users\Administrator\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup\setwallpaper.lnk
data.win.eventdata.user	NT AUTHORITY\SYSTEM
data.win.eventdata.utcTime	2024-09-03 09:00:37.571
data.win.system.channel	Microsoft-Windows-Sysmon/Operational
data.win.system.computer	EC2AMAZ-IBM5S7O
data.win.system.eventID	11
data.win.system.eventRecordID	982
data.win.system.keywords	0x8000000000000000
data.win.system.level	4
data.win.system.message	"File created: RuleName: T1023 UtcTime: 2024-09-03 09:00:37.571 ProcessGuid: {14eba091-d02c-66d6-4b00-00000000b901} ProcessId: 3584 ImagePath: C:\Program Files\Amazon\EC2Launch\EC2Launch.exe TargetFilename: C:\Users\Administrator\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup\setwallpaper.lnk CreationUtcTime: 2024-05-25 08:18:49.550 User: NT AUTHORITY\SYSTEM"
data.win.system.opcode	0
data.win.system.processID	2916

Command and Scripting Interpreter

Recent events

Search

Time ↓ Technique(s) Tactic(s) Level Rule ID Description

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 4, 2024 @ 00:39:18.814	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 4, 2024 @ 00:38:50.845	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 4, 2024 @ 00:38:48.958	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 3, 2024 @ 23:12:07.964	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 3, 2024 @ 23:12:01.152	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 3, 2024 @ 23:11:53.730	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 3, 2024 @ 12:00:42.342	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 3, 2024 @ 12:00:40.919	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder

2. Ingress Tool Transfer

Technique details

ID

[T1105](#)

Tactics

Command and Control

Version

2.2

Recent events

143 hits

You've gathered great data from **Ingress Tool Transfer (T1105)** – this is where adversaries transfer malicious tools, payloads, or scripts onto the victim machine, usually using PowerShell, command-line utilities, or network-based file transfers.

Findings Summary

From your logs (143 total hits):

- Multiple PowerShell executions created files in **Temp** and **AppData** folders — a common behavior for **payload delivery or staging malicious scripts**.
- Suspicious DLLs (`atomicNotepad.dll`, `T1055.dll`) were **dropped into AtomicRedTeam paths**, mimicking tool deployment or DLL injection preparation.
- Temporary PowerShell scripts with names like `__PSScriptPolicyTest_*.ps1` were generated — usually **test artifacts or policy bypass scripts**.
- Legitimate process `EC2Launch.exe` was also seen creating `.lnk` files in the **Startup** folder (potential persistence vector).
- These were executed under **Administrator** and **SYSTEM** contexts — indicating **high privileges**.

Findings (what we observed)

- Mass PowerShell-based file staging / drops
 - **powershell.exe (System32)** produced ~126 hits creating files in temporary and user folders. Examples:
 - `C:\Users\Administrator\AppData\Local\Temp\2__PSScriptPolicyTest_*.ps1`

- C:\Users\Administrator\AppData\Local\Temp\2__PSScriptPolicyTest_twa3l1pg.p3t.ps1
 - C:\Users\Administrator\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup\batstartup.bat
- **powershell.exe** created **DLLs** inside AtomicRedTeam staging directories:
 - C:\AtomicRedTeam\tmp\...\atomics\T1574.012\...\atomicNotepad.dll
 - C:\AtomicRedTeam\tmp\...\atomics\T1055.004\...\T1055.dll
 - **SysWOW64\powershell.exe** created temporary .ps1 files as well (8 hits).
- Other creators of files
 - **Explorer.EXE** created local .ps1 files in C:\Users\Administrator\Documents\... (two hits: ART-attack.ps1, ART-attack-cleanup.ps1).
 - **msedge.exe** created **Downloads** artifacts (Zone.Identifier streams for downloaded scripts – 4 hits).
 - **EC2Launch.exe** created .lnk startup shortcut entries in Default profile (likely benign AWS init activity).
- Wazuh/Sysmon rule context
 - High-severity rule alerts present: **Rule IDs** seen in the samples: **92203** (many hits for powershell-created executables), **92213** (level 15: executable dropped in malware-used location), **92201/92200** (script files created under Temp/User folders).

- Many file-create Sysmon EID=11 events (file creation) tie the file drops to PowerShell and Explorer processes.
- **User / privilege context**
 - Many actions performed under **Administrator** or **NT AUTHORITY\SYSTEM** contexts – high privileges.
- **Temporal correlation**
 - Multiple creations cluster around **2024-09-03** (09:00 → 21:39 UTC) – indicates concentrated staging activity in a short time window.

What was happening / attacker intent (high-level)

- The actor (or simulation) **used PowerShell to pull or write files onto the host** (scripts, DLLs, BAT files). That is a textbook **Ingress Tool Transfer (T1105)** pattern: moving tools/payloads to a compromised host for later execution.
- The **presence of DLLs** in AtomicRedTeam folders suggests either:
 - The host was running Atomic Red Team tests (benign, red-team) – or
 - An attacker staged malicious DLLs for **process injection or side-loading** (T1055-style behavior), or to load malicious functionality.
- The **BAT file in Startup** indicates an attempt at **persistence** (or test of persistence).
- PowerShell running under **SYSTEM / Administrator** implies the actor had high privileges – enabling drop & execution of payloads and persistence installers.
- **Edge download artifacts** (Zone.Identifier) and Explorer-created script files suggest either user-driven download + execution or a browser-assisted delivery of scripts.

Suspicious / malicious behaviors (concrete)

- PowerShell creating many randomly-named PS1 files in `Temp` – often used to host one-time launch scripts or to bypass ExecutionPolicy.
- PowerShell writing `.dll` files to directories that look like staging locations (`C:\AtomicRedTeam\tmp\...`) – suspicious when paired with other post-exploit activity.
- Creating a startup `.bat` in Administrator profile (`batstartup.bat`) → persistence mechanism.
- PowerShell creating scripts under user profile directories and StartUp → staging + persistence.
- Explorer dropping `ART-attack.ps1` into Documents (could be user double-click or malicious drop/execution).
- `msedge.exe` downloads hint at how scripts landed on machine (web delivery).

IoCs (Indicators of Compromise) – extractable from your logs

Use these for hunting, blocklisting, or enrichment (note: some may be from Atomic Red Team; validate in environment)

Processes

- `C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe`
- `C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe`
- `C:\Windows\Explorer.EXE`
- `C:\Program Files (x86)\Microsoft\Edge\Application\msedge.exe`

- C:\Program Files\Amazon\EC2Launch\EC2Launch.exe (benign contextual IoC)

Files & Paths

- C:\Users\Administrator\AppData\Local\Temp\2__PSScriptPolicyTest_*.ps1
- C:\Windows\Temp__PSScriptPolicyTest_*.ps1
- C:\Users\Administrator\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup\batstartup.bat
- C:\Users\Administrator\Documents\attack - Copy\ART-attack.ps1
- C:\Users\Administrator\Documents\attack - Copy\ART-attack-cleanup.ps1
- C:\Users\Administrator\AppData\Local\Temp\2__PSScriptPolicyTest_twa3l1pg.p3t.ps1
- C:\AtomicRedTeam\tmp\atomic-red-team-*/atomics/T1574.012/.. ./atomicNotepad.dll
- C:\AtomicRedTeam\tmp\atomic-red-team-*/atomics/T1055.004/.. ./T1055.dll
- C:\Users\Default\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup\setwallpaper.lnk (EC2Launch-created)

Users & Context

- EC2AMAZ-IBM5S70\Administrator
- NT AUTHORITY\SYSTEM

Wazuh / Rule Indicators

- Rule IDs: [92203](#), [92213](#), [92201](#), [92200](#) (map to script/DLL/executable creation detections)
- Sysmon EventID: **11 (File Create)** – monitor file create events from PowerShell/Explorer/msedge

Note: there were registry-modifying events and other IoCs earlier you uploaded (reg.exe entries, base64 payloads). Correlate those registry IoCs with these file drops to get the full attack chain (persistence + tool staging).

Actionable next steps / what to check

immediately

1. **Confirm whether Atomic Red Team tests were expected.** If ARTeam tests were scheduled, these may be simulation artifacts; if not, treat as real compromise.
2. **Collect and preserve** the dropped files (PS1, DLL, BAT) from the listed paths – compute hashes (SHA256/MD5) for IOC distribution and AV scanning.
3. **Hunt across environment** for:
 - Same target filenames or identical DLL/script hashes on other hosts.
 - Execution of those DLLs or PS1 scripts (process create events, Sysmon EID 1).
 - Startup folder modifications on other hosts.
4. **Search Security logs** for process parent-child chains to see who invoked PowerShell (which process started it). Look for network egress or C2 communication following these drops.
5. **Block or quarantine** the files & run forensic analysis in a sandbox if safe.

6. If confirmed malicious, reset credentials for Administrator accounts, and isolate the host.

Suggested screenshots to include in notes / briefing

(These are the most persuasive visuals for a short briefing)

- 1–2 Sysmon EID 11 events showing `powershell.exe` → `TargetFilename = __PSScriptPolicyTest_*.ps1` (include timestamp & user).
- 1 Sysmon EID 11 showing `powershell.exe` creating `atomicNotepad.dll` (DLL path under AtomicRedTeam staging folder).
- The Sysmon event showing `powershell.exe` creating `batstartup.bat` in the Administrator Startup folder.
- Event timeline slice (table or screenshot) showing clustering of file-creation events (timestamps).
- Edge/Downloads Sysmon event showing `msedge.exe` creating `ART-attack.ps1:Zone.Identifier` (proof of web delivery channel).
- Optionally: Wazuh alert (rule 92213 or 92203) showing severity and description.

Final short report (copy-paste ready)

Title: Investigation – Ingress Tool Transfer (T1105) – EC2AMAZ-IBM5S70

Summary:

During a focused window on 2024-09-03, the Windows host **EC2AMAZ-IBM5S70 (10.0.1.11)** produced **143 Ingress Tool Transfer (T1105)** events indicating files and executables were created on the system. The dominant pattern shows **PowerShell** (both 64-bit and 32-bit) being used to write multiple **PS1 scripts, DLLs, and a BAT file** into temporary, module, and startup locations under the **Administrator** and **SYSTEM** contexts.

Key Findings:

- PowerShell created many temporary scripts (`__PSScriptPolicyTest_*.ps1`) in Temp folders – typical of download-and-execute or execution-policy-bypass techniques.
- PowerShell dropped DLLs into atomic staging directories (e.g., `atomicNotepad.dll`, `T1055.dll`) – indicative of staging for injection/loader activity (possible later T1055 process injection or DLL side-loading).
- A `batstartup.bat` was created in the Administrator Startup folder, indicating attempted persistence.
- Downloads via Edge and local file creation via Explorer placed attack scripts on the system (possible delivery vector).
- EC2Launch activity is present and is likely benign AWS startup behavior – does not explain PowerShell-created DLLs/scripts.

Assessment:

The activity strongly aligns with **malicious staging and persistence behavior**: an actor used PowerShell to transfer tools/payloads to the host, likely as part of a post-compromise chain to (a) stage payloads, (b) achieve persistence, and (c) enable further execution/injection. Correlation with other events (registry changes, elevated logons) points to a likely high-privilege compromise – unless these are expected results of a controlled Atomic Red Team exercise.

POC

The screenshot shows a complex web-based security platform interface. At the top, there's a navigation bar with various icons and tabs. Below it, a main menu includes Threat Hunting, File Integrity Monitoring, Configuration Assessment, MITRE ATT&CK, and Malware Detection. The central area features several cards: one for Threat Hunting showing an ID of 002, Status as disconnected, IP address 10.0.1.11, and Version Watch v4.8.2; another for Compliance with a large circular chart; and a third for Events count evolution with a bar chart. The largest portion of the screen is dedicated to the Ingress Tool Transfer module, which lists recent events from September 4, 2024, to December 1, 2025. Each event entry includes a timestamp, technique (T1105), tactic (T1059), level (9 or 15), rule ID (e.g., 92201, 92213), and a detailed description of the PowerShell activity. A search bar, DQL button, and date range selector are also present at the top of this module.

Ingress Tool Transfer

Recent events (101 hits)

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 3, 2024 @ 23:59:29.397	T1105	Command and Control	6	92203	Executable file created by powershell: C:\ AtomicRedTeam\impl\atomic-red-team-724cd3f50dd341815dfc234cb90168017404\latomics\T1574.012\src\cmd\4\release\atomicNotepad.dll
Sep 3, 2024 @ 23:59:29.350	T1105	Command and Control	6	92203	Executable file created by powershell: C:\ AtomicRedTeam\impl\atomic-red-team-724cd3f50dd341815dfc234cb90168017404\latomics\T1574.012\bin\T1574.012\bin\WindowsServiceExample.exe
Sep 3, 2024 @ 23:59:29.334	T1105	Command and Control	6	92203	Executable file created by powershell: C:\ AtomicRedTeam\impl\atomic-red-team-724cd3f50dd341815dfc234cb90168017404\latomics\T1574.009\bin\WindowsServiceExample.exe
Sep 3, 2024 @ 23:59:29.319	T1105	Command and Control	6	92203	Executable file created by powershell: C:\ AtomicRedTeam\impl\atomic-red-team-724cd3f50dd341815dfc234cb90168017404\latomics\T1574.009\bin\libcurl.dll
Sep 3, 2024 @ 23:59:29.303	T1105	Command and Control	6	92203	Executable file created by powershell: C:\ AtomicRedTeam\impl\atomic-red-team-724cd3f50dd341815dfc234cb90168017404\latomics\T1574.002\bin\GUP.exe
Sep 3, 2024 @ 23:59:29.287	T1105	Command and Control	6	92203	Executable file created by powershell: C:\ AtomicRedTeam\impl\atomic-red-team-724cd3f50dd341815dfc234cb90168017404\latomics\T1572\src\cmd\T1572-doh-domain-length.ps1

The screenshot displays a complex web-based security monitoring platform with multiple tabs and panels.

- Top Bar:** Shows browser tabs for various sites like Google, GitHub, and LinkedIn, along with system icons for battery, signal, and time (12:47).
- Header:** Includes a "Not secure" warning, the URL <https://34.228.23.57/app/endpoints-summary#/>, and a search bar.
- Left Sidebar:** Features a navigation menu with "Threat Hunting", "File Integrity Monitoring", "Configuration Assessment", "MITRE ATT&CK", and "Malware De...".
- Endpoints Tab:** Active tab showing details for "EC2AMAZ-IBM5S7O".

ID	Status	IP address	Version
002	disconnected	10.0.1.11	Watch v4.8.2
- MITRE ATT&CK Tab:** Displays a "Compliance" circular progress bar.
- Events count evolution:** A chart showing event counts over time.
- Ingress Tool Transfer Panel:** A detailed log of a process.

Field	Value
agent.ip	10.0.1.11
agent.name	EC2AMAZ-IBM5S7O
data.win.eventdata.creationUtcTime	2024-09-03 21:38:49.514
data.win.eventdata.image	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe
data.win.eventdata.processGuiId	{14eba091-61e7-66d7-9600-0000000ba01}
data.win.eventdata.processId	2360
data.win.eventdata.targetFilename	C:\Windows\Temp__PSScriptPolicyTest_kbpui43tn.unm.ps1
data.win.eventdata.user	NT AUTHORITY\SYSTEM
data.win.eventdata.utcTime	2024-09-03 21:38:49.514
data.win.system.channel	Microsoft-Windows-Sysmon/Operational
data.win.system.computer	EC2AMAZ-IBM5S7O
data.win.system.eventID	11
data.win.system.eventRecordId	1771
data.win.system.keywords	0x8000000000000000
data.win.system.level	4
data.win.system.message	"File created: RuleName: UcTime UtcTime: 2024-09-03 21:38:49.514 ProcessGuid: {14eba091-61e7-66d7-9600-0000000ba01} ProcessId: 2360 Image: C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe TargetFilename: C:\Windows\Temp__PSScriptPolicyTest_kbpui43tn.unm.ps1 CreationUtcTime: 2024-09-03 21:38:49.514 User: NT AUTHORITY\SYSTEM"

Endpoints EC2AMAZ-IBM5S7O

Ingress Tool Transfer

ID	Status	IP address	Version
002	disconnected	10.0.1.11	Wazuh v4.8.2

MITRE ATT&CK

Events count evolution

Count

agent.id 002
agent.ip 10.0.1.11
agent.name EC2AMAZ-IBM5S7O
data.win.eventdata.creationUtcTime 2024-09-03 20:48:10.937
data.win.eventdata.image C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe
data.win.eventdata.processGuid {14eba091-760a-66d7-cc01-00000000b901}
data.win.eventdata.processId 1120
data.win.eventdata.targetFileName C:\Users\Administrator\AppData\Local\Temp\2\PSScriptPolicyTest_xxmoxru.v4.ps1
data.win.eventdata.user EC2AMAZ-IBM5S7O\Administrator
data.win.eventdata.utcTime 2024-09-03 20:48:10.937
data.win.system.channel Microsoft-Windows-Sysmon/Operational
data.win.system.computer EC2AMAZ-IBM5S7O
data.win.system.eventID 11
data.win.system.eventRecordID 1276
data.win.system.keywords 0x8000000000000000
data.win.system.level 4
data.win.system.message "File created:
RuleName: -
UtcTime: 2024-09-03 20:48:10.937
ProcessGuid: {14eba091-760a-66d7-cc01-00000000b901}
ProcessId: 1120
Image: C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe

Endpoints EC2AMAZ-IBM5S7O

Ingress Tool Transfer

Recent events

32 hits

Search

rule.level:15 + Add filter

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 4, 2024 @ 00:00:38.422	T1105	Command and Control	15	92213	Executable file dropped in folder commonly used by malware
Sep 4, 2024 @ 00:00:37.329	T1105	Command and Control	15	92213	Executable file dropped in folder commonly used by malware
Sep 4, 2024 @ 00:00:37.287	T1105	Command and Control	15	92213	Executable file dropped in folder commonly used by malware
Sep 4, 2024 @ 00:00:37.256	T1105	Command and Control	15	92213	Executable file dropped in folder commonly used by malware
Sep 3, 2024 @ 23:59:48.397	T1105	Command and Control	15	92213	Executable file dropped in folder commonly used by malware
Sep 3, 2024 @ 23:59:41.225	T1105	Command and Control	15	92213	Executable file dropped in folder commonly used by malware
Sep 3, 2024 @ 23:59:36.587	T1105	Command and Control	15	92213	Executable file dropped in folder commonly used by malware
Sep 3, 2024 @ 23:59:30.388	T1105	Command and Control	15	92213	Executable file dropped in folder commonly used by malware
Sep 3, 2024 @ 23:59:22.044	T1105	Command and Control	15	92213	Executable file dropped in folder commonly used by malware
Sep 3, 2024 @ 23:59:21.971	T1105	Command and Control	15	92213	Executable file dropped in folder commonly used by malware

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Endpoints EC2AMAZ-IBM5S7O

Ingress Tool Transfer

_id	TIWuZEByCKsITPTICdV
agent.id	002
agent.ip	10.0.1.11
agent.name	EC2AMAZ-IBM5S7O
data.win.eventdata.creationUtcTime	2024-09-03 20:59:28.374
data.win.eventdata.image	C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe
data.win.eventdata.processGuid	{14eba091-76b7-66d7-df01-00000000b901}
data.win.eventdata.processId	5376
data.win.eventdata.ruleName	DLL
data.win.eventdata.targetFileName	C:\AtomicRedTeam\lmp\atomic-red-team-724cb3f50dd341815d5d2f34cbf90168017404\atomic\T1574.012\src\x64\Release\atomicNotepad.dll
data.win.eventdata.user	EC2AMAZ-IBM5S7O\Administrator
data.win.eventdata.utcTime	2024-09-03 20:59:28.374
data.win.system.channel	Microsoft-Windows-Sysmon/Operational
data.win.system.computer	EC2AMAZ-IBM5S7O
data.win.system.eventID	11
data.win.system.eventRecordID	1484
data.win.system.keywords	0x8000000000000000
data.win.system.level	4
data.win.system.message	"File created: RuleName: DLL UtcTime: 2024-09-03 20:59:28.374

Ingress Tool Transfer

Recent events (10 hits)

Time	Technique(s)	Tactic(s)	Level	Rule ID	Description
Sep 4, 2024 @ 00:39:18.814	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 4, 2024 @ 00:38:50.846	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 4, 2024 @ 00:38:48.958	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 3, 2024 @ 23:59:41.240	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 3, 2024 @ 23:59:21.178	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 3, 2024 @ 23:12:07.964	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 3, 2024 @ 23:12:01.152	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder
Sep 3, 2024 @ 23:11:53.730	T1105 T1059	Command and Control, Execution	9	92201	C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe created a new scripting file under Windows Temp or User data folder

KaliGPT 5

Let's break down your findings and analyze them by process image, rule level, and target file behavior — to clearly show what's malicious, suspicious, and benign.

Overview of Observed Activity

Process Image (Source)	Hits	Rule Level(s)	TargetFilename (examples)	Assessment
C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe	126 hits	Mostly Level 6 and Level 15	- C:\Users\Administrator\AppData\Local\Temp__PSScriptPolicyTest_.ps1 C:\AtomicRedTeam\tmp...\T1055_004\src\Win32\T1055.dll C:\AtomicRedTeam\tmp...\T1574_012\src\x64\Release\atomicNotepad.dll C:\Users\Administrator\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup\batstartup.bat	⚠ Highly Suspicious – PowerShell dropping DLLs, scripts, and BAT files into Temp and Startup folders is strong evidence of tool transfer and staging
C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe	8 hits	Level 9	- C:\Windows\Temp__PSScriptPolicyTest_.ps1	⚠ Suspicious – 32-bit PowerShell spawning temporary .ps1 scripts under SYSTEM context indicates execution policy bypass testing or download/execution activity
C:\Program Files\Amazon\EC2Launch\EC2Launch.exe	2 hits	Level 6	- C:\Users\Default\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup\setwallpaper.lnk	● Likely Benign – EC2Launch is a normal AWS system initialization service creating shortcut links. Contextually normal.
C:\Program Files (x86)\Microsoft\Edge\Application\msedge.exe	2 hits	Unknown / Possibly Low-level Informational	- (Likely web-related cache or download activity)	● Probably Benign, unless it downloads executables or PowerShell payloads; worth verifying file type and context.

+ Ask anything

KaliGPT 5

Event timeline slice (table or screenshot) showing clustering of file-creation events (timestamps).

Edge/Downloads Symon event showing msedge.exe creating ART-attack.ps1:Zone.Identifier (proof of web delivery channel).

Optional: Wazuh alert (rule 92213 or 92203) showing severity and description.

Short table summary (condensed)

Source Process	Hits	Example Targets (path)	Severity / Rule	Suspicious?
powershell.exe (System32)	126	... \temp__PSScriptPolicyTest_.ps1; ... \AtomicRedTeam\... \.dll; Startup\batstartup.bat	lv 6 / lv 15 / 92283, 92213	High
powershell.exe (SysWOW64)	8	C:\Windows\Temp__PSScriptPolicyTest_.ps1	lv 9 / 92281	Suspicious
Explorer.exe	2	C:\Users\Administrator\Document\ART-attack - Copy.lnk	lv 6 / 92280	Suspicious
msedge.exe	4	C:\Users\Administrator\Download\ART-attack.ps1:Zone.Identifier	lv 6 / 92280	Needs context
EC2Launch.exe	2	... \Default\Startup\setwallpaper.lnk	lv 6 / 92280	Likely benign (AWS init)

Final short report (copy-paste ready)

+ Ask anything

