

# Unit 42 SOC Lab – Sysmon Log Analysis & Backdoor Investigation

**Analyst:** Aarush Nepali

**Source:** Hack The Box – *Sherlock Lab: Unit 42*

**Focus:** Detection and analysis of UltraVNC backdoor using Sysmon and Splunk

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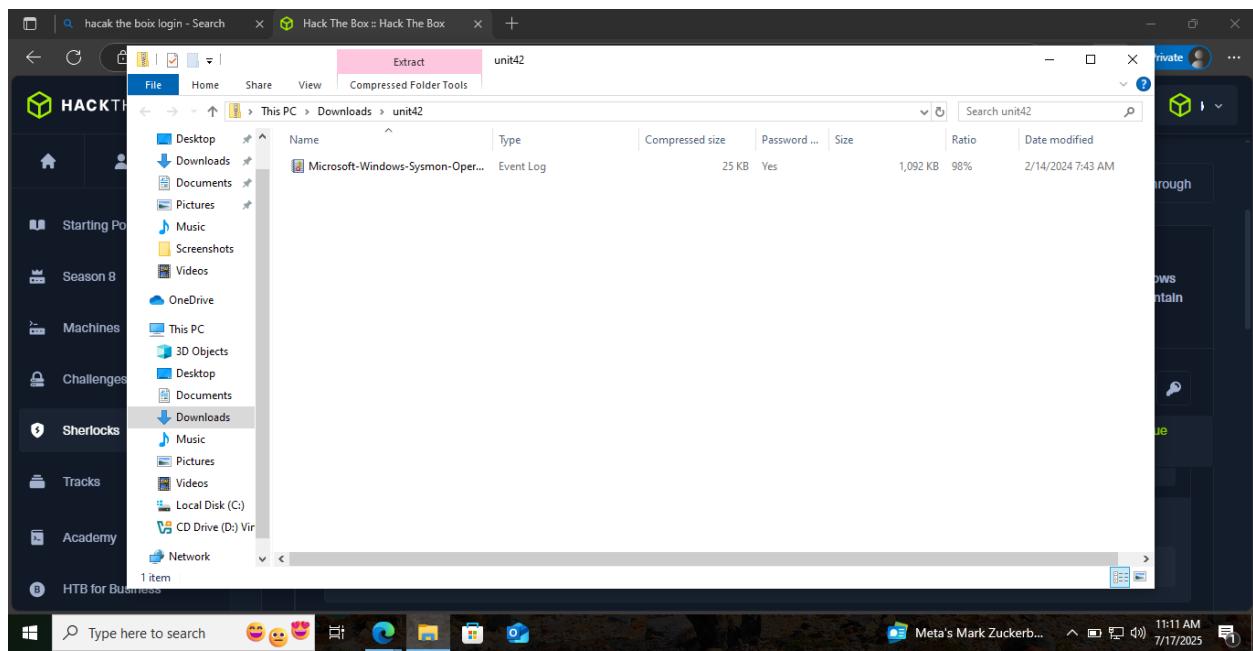
## Objective

Conduct structured threat hunting using Sysmon logs to:

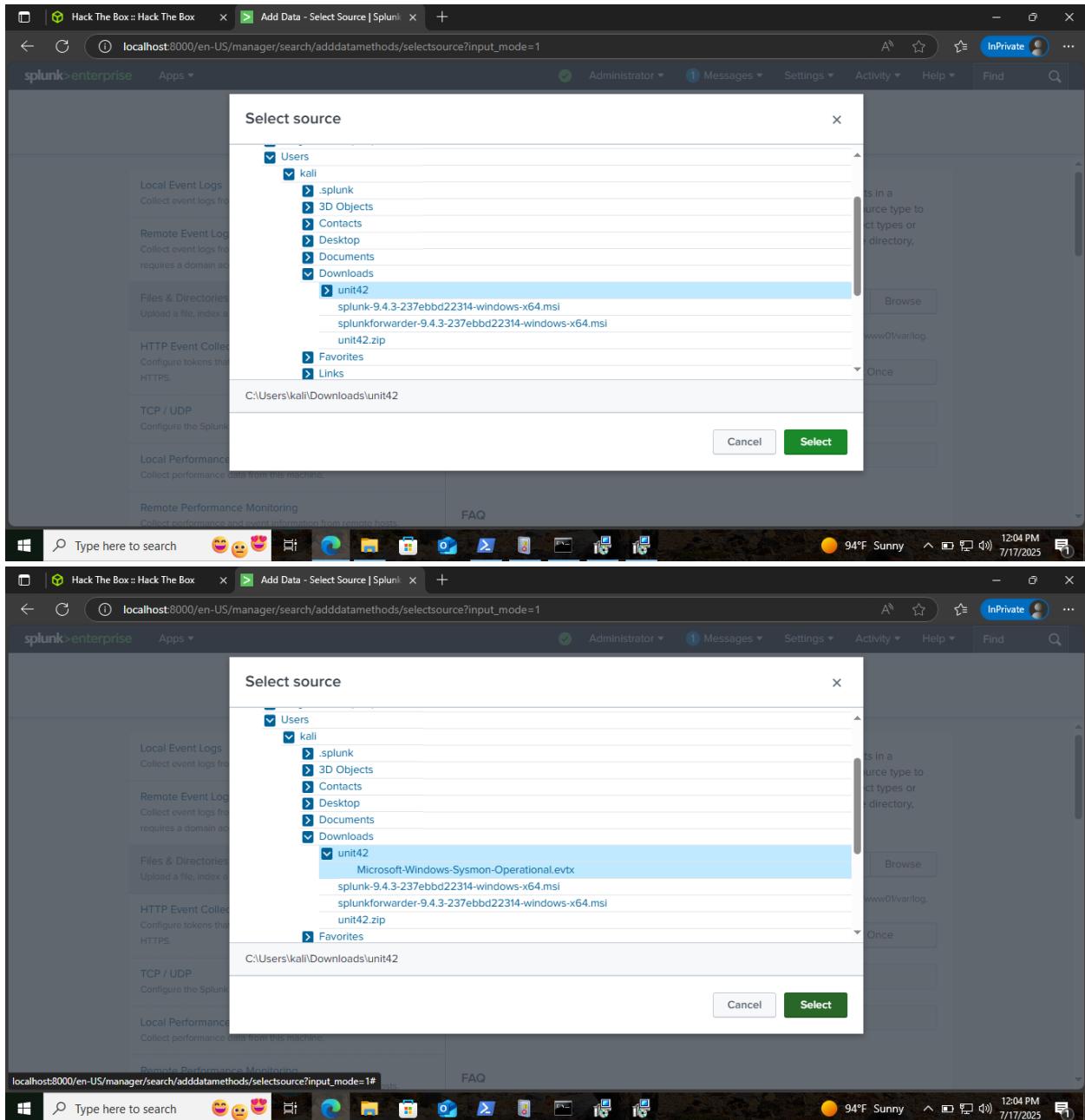
- Detect suspicious processes and file activity
  - Trace potential backdoor behavior
  - Practice advanced log analysis workflows in a simulated SOC setting
- 

## Lab Environment

- Platform: Hack The Box → *Sherlocks > Unit 42*
- Files: `unit42.zip` extracted with password `hackthebox`
- Log File: `Microsoft-Windows-Sysmon operational.evtx`
- Tools Used:
  -  7-Zip (to extract log archive)
  -  Event Viewer (for quick inspection)
  -  Splunk (for structured log ingestion and analysis)
  -  VirusTotal (for IOC validation)



The screenshot shows a Windows desktop environment with several open windows. In the foreground, a file context menu is open over a file named 'unit42' in the 'Downloads' folder. The menu includes options like 'Open', 'Extract All...', '7-Zip', 'Pin to Start', 'Scan with Microsoft Defender...', 'Share', 'Open with...', 'Restore previous versions', 'Send to', 'Cut', 'Copy', 'Create shortcut', 'Delete', 'Rename', and 'Properties'. A secondary context menu is also visible on the right, showing options such as 'Open archive', 'Open archive', 'Extract files...', 'Extract Here', 'Extract to "unit42"', 'Test archive', 'Add to archive...', 'Compress and email...', 'Add to "unit42\_2.7z"', 'Compress to "unit42\_2.7z" and email', 'Add to "unit42\_2.zip"', 'Compress to "unit42\_2.zip" and email', and 'CRC SHA'. In the background, the Event Viewer window is open, showing a list of events from the 'Microsoft-Windows-Sysmon-Operational' log. The list contains six 'Information' level events from 2/13/2024 at 7:41:58 PM, all from source 'Microsoft-Windows-Sysmon'. The details pane shows the description for Event ID 1: 'The description for Event ID 1 from source Microsoft-Windows-Sysmon cannot be found. Either the component that raises this event is not installed on your local computer or the installation is corrupted. You can install or repair the component on the local computer.' The Event Viewer window has an 'Actions' pane on the right with options like 'Open Saved Log...', 'Create Custom View...', 'Import Custom View...', 'Filter Current Log...', 'Clear Filter', 'Properties', 'Find...', 'Save Filtered Log File As...', 'Save Filter to Custom View...', 'View', 'Delete', 'Rename', 'Refresh', 'Help', 'Event Properties', 'Copy', 'Save Selected Events...', 'Refresh', and 'Help'. The taskbar at the bottom shows the Windows logo, a search bar, and several pinned icons. The system tray shows the date and time as 11:14 AM on 7/17/2025, and a GPU status showing NVDA +1.10%.



The screenshots show the 'Select source' dialog box in the Splunk interface. The dialog box lists various data sources under the 'Users' section, specifically for the 'kali' user. The 'Downloads' section is expanded, showing files like 'splunk-9.4.3-237ebbd22314-windows-x64.msi', 'splunkforwarder-9.4.3-237ebbd22314-windows-x64.msi', and 'unit42.zip'. In the top screenshot, 'unit42' is selected. In the bottom screenshot, 'Microsoft-Windows-Sysmon-Operational.evtx' is selected. Both screenshots show the 'Select' button at the bottom right of the dialog box.

## ➤ Data Ingestion & Setup

### ➤ Event Viewer

- Opened .evtx in native viewer
- Filtered for Event ID 1 (Process Creation) to spot execution artifacts

### ➤ Splunk Workflow

1. Ingested extracted log file into new index `htb_unit42`
2. Used `Monitor Directory` method under Splunk's "Add Data" wizard
3. Set time zone to **GMT (UTC)** to normalize log timelines
4.  Confirmed **169 events** successfully indexed

The image consists of two vertically stacked screenshots of the Splunk 9.4.3 interface. Both screenshots show the 'Preferences' dialog box open in the foreground, with the 'Global' tab selected. The 'Time zone' dropdown is highlighted in the bottom screenshot. The background shows a search results table for a 'New Search' with the search query `index="htb-unit42"` and 169 events. The operating system taskbar at the bottom of each screenshot shows the date as 7/17/2025 and the time as 12:06 PM and 12:07 PM respectively.

## 📈 Threat Hunting Results

### Q1. File Creation Events (Event ID 11)

- **Splunk Query:** index="htb\_unit42" EventCode=11
- **Findings:** 56 file creation/overwrite events

**EventCode**

14 Values, 100% of events

Selected: Yes No

Reports

Average over time Maximum value over time Minimum value over time

Top values Top values by time Rare values

Events with this field

Avg: 12.171597633136095 Min: 1 Max: 26 Std Dev: 6.425407004265999

Top 10 Values	Count	%
11	56	33.136%
23	26	15.385%
13	19	11.243%
2	16	9.467%
7	15	8.876%
12	14	8.284%
17	7	4.142%
1	6	3.55%
22	3	1.775%
15	2	1.183%

sourcetype = WinEventLog:Microsoft-Windows-Sysmon/Operational

**Selected Fields**

- a host 1
- a source 1
- a sourcetype 1

**Interesting Fields**

- a ComputerName 1
- # EventCode 14
- # EventType 1
- a IMPHASH 22
- a index 1
- a Keywords 1
- # linecount 7
- a LogName 1
- a MDS 30
- a Message 100+
- a OpCode 1

**Timeline format** **Zoom Out**

12:10 PM 7/17/2025

**Event**

Time: 2/14/24 3:43:26.000 AM

Event:

```

02/13/2024 07:43:26 PM
LogName=Microsoft-Windows-Sysmon/Operational
EventCode=11
EventType=4
ComputerName=DESKTOP-887GK2L
User=NOT_TRANSLATED
Sid=S-1-5-18
SidType=0
SourceName=Microsoft-Windows-Sysmon
Type=Information
RecordNumber=118914
Keywords=None
TaskCategory=11
Opcode=Info
Message=
2024-02-14 03:43:26.880
C:\Windows\System32\mmc.exe
C:\Users\cyberjunkie\Desktop\Microsoft-Windows-Sysmon-Operational.evtx
2024-02-14 03:43:26.880
DESKTOP-887GK2L\cyberjunkie
Collapse

```

**Selected Fields**

- a host 1
- a source 1
- a sourcetype 1

**Interesting Fields**

- a ComputerName 1
- # EventCode 1
- # EventType 1
- a index 1
- a Keywords 1
- # linecount 1
- a LogName 1
- a Message 53
- a OpCode 1
- a punct 7
- # RecordNumber 56
- a Sid 1
- # SidType 1
- a SourceName 1
- a splunk\_server 1

**Timeline format** **Zoom Out** **Format** **Show: 20 Per Page** **View: List**

12:14 PM 7/17/2025

## Q2. Malicious Process Execution

- **Query:** index="htb-unit42" EventCode=1
- Identified suspicious EXE:
  - o C:\Users\cyberjunkie\Downloads\preventivo\_24.02.14.exe
  - o Flagged by 47 AV engines on VirusTotal (tagged: UltraVNC, Backdoor)

Splunk > enterprise Apps

Administrator Messages Settings Activity Help

New Search

index="htb-unit42" EventCode=1

6 events (before 7/17/25 7:15:34.000 PM) No Event Sampling

Events (6) Patterns Statistics Visualization

Timeline format Zoom Out + Zoom to Selection Deselect 100 milliseconds per column

Format Show: 20 Per Page View: List

Selected Fields

- a host 1
- a source 1
- a sourcetype 1

Interesting Fields

- a ComputerName 1

Time Event

Time	Event
2/14/24 3:41:58.000 AM	02/13/2024 07:41:58 PM LogName=Microsoft-Windows-Sysmon/Operational EventCode=1 EventType=4 ComputerName=DESKTOP-887GK2L Show all 30 lines host = DESKTOP-887GK2L source = C:\Users\wall\Downloads\unit42\Microsoft-Windows-Sysmon-Operational.evtx

Time Event

Time	Event
2/14/24 3:41:45.000 AM	02/13/2024 07:41:45 PM LogName=Microsoft-Windows-Sysmon/Operational EventCode=1 EventType=4 ComputerName=DESKTOP-887GK2L User=NOT_TRANSLATED Sid=S-1-5-18 SidType=0 SourceName=Microsoft-Windows-Sysmon Type=Information RecordNumber=118772 Keywords=None TaskCategory=Devices OpCode=Info Message=technique_id=T1027,technique_name=Obfuscated Files or Information 2024-02-14 03:41:45.304 C:\Program Files\Mozilla Firefox\pingsender.exe 122.0.1 - Firefox Mozilla Foundation pingsender.exe "C:\Program Files\Mozilla Firefox\pingsender.exe" https://incoming.telemetry.mozilla.org/submit/telemetry/cb88145b-129d-471c-b605-4fdf09fec680/event/Firefox/122.0.1/release/20240205133611?v=4 C:\Users\ CyberJunkie\AppData\Roaming\Mozilla Firefox\Profile 12:16 PM 7/17/2025

Screenshot of a Splunk search interface showing event details for a file. The event details pane shows the following fields:

OpCode	Info
RecordNumber	118772
SHA1	282F855BEB4FACF0726E13ECCAD87D341B30B85
SHA256	B412C45DE423534D85F121ABC348FB38020FDA804EA0A972708B7447B0E7325D
Sid	S-1-5-18
SidType	0
SourceName	Microsoft-Windows-Sysmon
TaskCategory	Devices
Type	Information
User	NOT_TRANSLATED
technique_name	Obfuscated
v	4

Time: \_time 2024-02-14T03:41:45.000+00:00

Default: index htb-unit42

linecount: 31

Below the event details, the search bar shows: Type here to search and the URL https://www.virustotal.com/gui/file/b412c45de423534d85f121abc348fb38020fda804ea0a972708b7447b0e7325d

The VirusTotal analysis page shows the following details:

- Community Score: 0 / 70
- No security vendors flagged this file as malicious
- File Hash: b412c45de423534d85f121abc348fb38020fda804ea0a972708b7447b0e7325d
- File Type: pingsender.exe
- File Size: 78.91 KB
- Last Analysis Date: 23 days ago
- File Extension: EXE

Below the analysis summary, there are tabs for DETECTION, DETAILS, RELATIONS, BEHAVIOR, and COMMUNITY. The DETECTION tab is selected.

Join our Community and enjoy additional community insights and crowdsourced detections, plus an API key to automate checks.

Security vendors' analysis:

Vendor	Result	Vendor	Result
Acronis (Static ML)	Undetected	AhnLab-V3	Undetected
Alibaba	Undetected	AliCloud	Undetected
ALYac	Undetected	Anti-AVL	Undetected

Do you want to automate checks? 

Below the analysis summary, the search bar shows: Type here to search and the URL https://www.virustotal.com/gui/file/b412c45de423534d85f121abc348fb38020fda804ea0a972708b7447b0e7325d

Event		
	Time	
	host = DESKTOP-887GK2L   source = C:\Users\kali\Downloads\unit42\Microsoft-Windows-Sysmon-Operational.evtx   sourcetype = WinEventLog:Microsoft-Windows-Sysmon/Operational	
> 2/14/24 3:41:56.000 AM	02/13/2024 07:41:56 PM	LogName=Microsoft-Windows-Sysmon/Operational
		EventCode=1
		EventType=4
		ComputerName=DESKTOP-887GK2L
		User=NOT_TRANSLATED
		Sid=S-1-5-18
		SidType=0
		SourceName=Microsoft-Windows-Sysmon
		Type=Information
		RecordNumber=118793
		Keywords=None
		TaskCategory=Devices
		OpCode=Info
		Message=technique_id=T1204,technique_name=User Execution
		2024-02-14 03:41:56.538
		C:\Users\CyberJunkie\Downloads\Preventivo24.02.14.exe.exe
		1.1.2
		Photo and vn Installer
		Photo and vn
		Photo and Fax Vn
		Fattura 2 2024.exe
		"C:\Users\CyberJunkie\Downloads\Preventivo24.02.14.exe.exe"
		1.1.2
		Photo and vn Installer
		Photo and vn
		Photo and Fax Vn
		Fattura 2 2024.exe
		"C:\Users\CyberJunkie\Downloads\Preventivo24.02.14.exe.exe"
		C:\Users\CyberJunkie\Downloads\
		DESKTOP-887GK2L\CyberJunkie
		Medium
		SHA1=18A24A0AC952D31FC5B56F5C0187041174FFC61, MD5=32F35B78A3DC594CE3C99F2981DEF6B, SHA256=0CB44C4F8273750F40497FC81E850F739, 27E70B13C8F80DCDCE9D1478E6F3, IMPHASH=36ACA8ED00B161C588FCF5AFDC1AD9FA
		C:\Windows\explorer.exe
		C:\Windows\Explorer.EXE
		DESKTOP-887GK2L\CyberJunkie
		Collapse
		host = DESKTOP-887GK2L   source = C:\Users\kali\Downloads\unit42\Microsoft-Windows-Sysmon-Operational.evtx   sourcetype = WinEventLog:Microsoft-Windows-Sysmon/Operational
> 2/14/24 3:41:45.000 AM	02/13/2024 07:41:45 PM	LogName=Microsoft-Windows-Sysmon/Operational
		EventCode=1

Hack The Box :: Hack The Box | Search | Splunk 9.4.3 | virustotal - Search | VirusTotal - File - 0cb44c4f8273750fa40497fca81e850f73927e70b13c8f80cdcf9d1478e6f3 | + | InPrivate | Sign in | Sign up

0cb44c4f8273750fa40497fca81e850f73927e70b13c8f80cdcf9d1478e6f3

51/72 security vendors flagged this file as malicious

0cb44c4f8273750fa40497fca81e850f73927e70b13c8f80cdcf9d1478e6f3

Fattura 2 2024.exe

Community Score: -61

Size: 5.68 MB | Last Analysis Date: 2 days ago | EXE

peexe invalid-signature overlay checks-usb-bus signed checks-network-adapters detect-debug-environment executes-dropped-file checks-user-input calls-wmi long-sleeps

DETECTION DETAILS RELATIONS BEHAVIOR COMMUNITY 14

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Popular threat label: trojan.winvnc/based Threat categories: trojan, hacktool, pua Family labels: winvnc, based, ultravnc

Security vendors' analysis: Alibaba, RiskWare:Win32/UltraVNC.2d3a9d9a, AliCloud, Trojan:Win/WinVNC-based.AW

Do you want to automate checks?

Type here to search

12:19 PM 7/17/2025

Hack The Box :: Hack The Box | Search | Splunk 9.4.3 | virustotal - Search | VirusTotal - File - 0cb44c4f8273750fa40497fca81e850f73927e70b13c8f80cdcf9d1478e6f3 | + | InPrivate | Sign in | Sign up

0cb44c4f8273750fa40497fca81e850f73927e70b13c8f80cdcf9d1478e6f3

Popular threat label: trojan.winvnc/based Threat categories: trojan, hacktool, pua Family labels: winvnc, based, ultravnc

Security vendors' analysis: Alibaba, RiskWare:Win32/UltraVNC.2d3a9d9a, AliCloud, Trojan:Win/WinVNC-based.AW

Do you want to automate checks?

Security vendor	Malware detection	Security vendor	Malware detection
Alibaba	RiskWare:Win32/UltraVNC.2d3a9d9a	AliCloud	Trojan:Win/WinVNC-based.AW
ALYac	Misc.HackTool.UltraVNC	Antiy-AVL	RiskWare[RemoteAdmin]/Win32.UltraVNC
Arcabit	Trojan.Generic.D43FF5E8	Arctic Wolf	Unsafe
Avast	Other:Malware-gen [Tr]	AVG	Other:Malware-gen [Tr]
Avira (no cloud)	TR/AVI.Agent.ybosj	BitDefender	Trojan.GenericKD.71300584
Bkav Pro	W32.Common.09E6CAF3	CrowdStrike Falcon	Win/malicious_confidence_100% (W)
CTX	Exe.trojan.winvnc	Cynet	Malicious (score: 99)
DeepInstinct	MALICIOUS	Elastic	Malicious (moderate Confidence)
Emsisoft	Trojan.GenericKD.71300584 (B)	eScan	Trojan.GenericKD.71300584
ESET-NOD32	Win32/WinVNC-based.AC	Fortinet	W32/WinVNC_based.AC!tr

Type here to search

12:19 PM 7/17/2025

Two screenshots of a Windows desktop environment showing analysis results for a file.

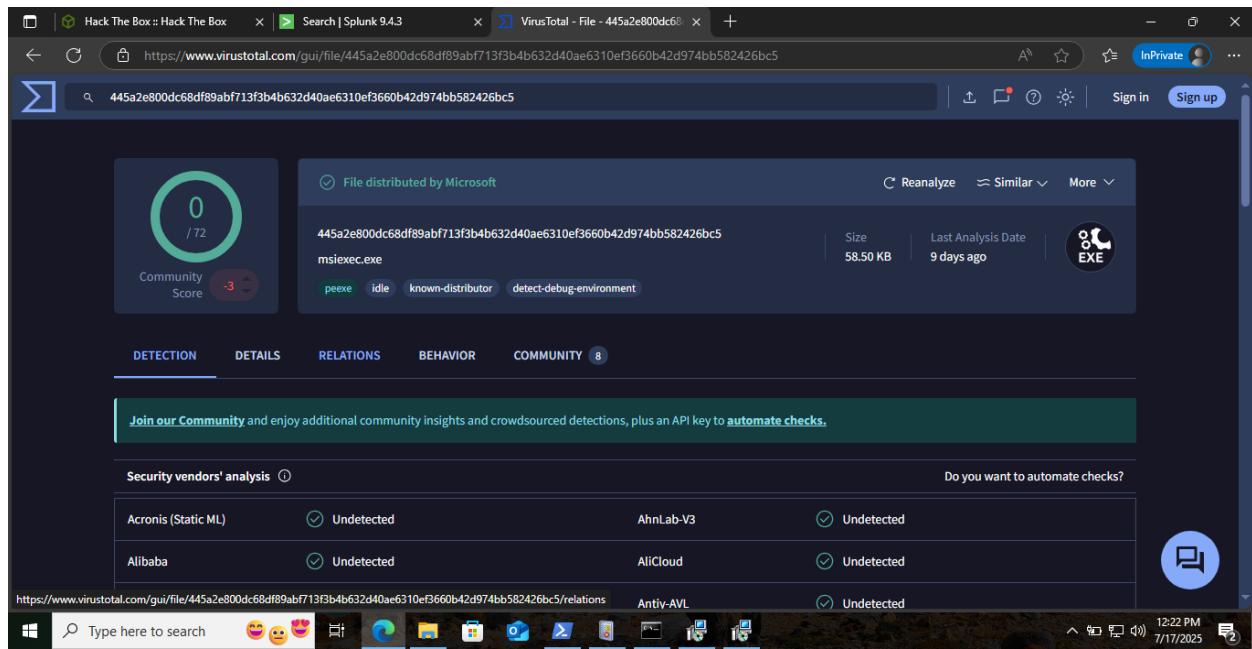
**Top Screenshot (VirusTotal Analysis):**

- URL: <https://www.virustotal.com/gui/file/8ca4b8b7a2f8e6e7d1df1ae46437fc252cd9c4b78ca3c7adcb721bd0f68b358>
- File Hash: 8ca4b8b7a2f8e6e7d1df1ae46437fc252cd9c4b78ca3c7adcb721bd0f68b358
- File Name: msisexec.exe
- File Type: EXE
- Community Score: 0 / 72
- Analysis Status: No security vendors flagged this file as malicious
- File Size: 68.00 KB
- Last Analysis Date: 19 days ago
- Tags: peexe, idle, detect-debug-environment, legit, 64bits

**Bottom Screenshot (Splunk Search Results):**

- URL: <https://localhost:8000/en-US/app/search/search?q=search%20index%3Dhtb-unit42%20EventCode%3D1&display.page.search.mode=smart&dispatch.sampled=1>
- Search Query: search%20index%3Dhtb-unit42%20EventCode%3D1
- Event Details:

  - User=NOT\_TRANSLATED
  - Sid=S-1-5-18
  - SidType=0
  - SourceName=Microsoft-Windows-Sysmon
  - Type=Information
  - RecordNumber=118805
  - Keywords=None
  - TaskCategory=Devices
  - OpCode=Info
  - Message=technique\_id=T1218,technique\_name=Signed Binary Proxy Execution
  - 2024-02-14 03:41:57.787
  - C:\Windows\SysWOW64\msisexec.exe
  - 5.0.19041.3636 (WinBuild.160101.0800)
  - Windows® installer
  - Windows Installer - Unicode
  - Microsoft Corporation
  - msisexec.exe
  - C:\Windows\syswow64\msiexec.exe -Embedding 5364C761FA9A55D636271A1CE8A6742D C
  - C:\Windows\SysWOW64\
  - DESKTOP-887GK2L\CyberJunkie
  - Medium
  - SHA1=9AB9B12901E1EA2DF943B45AD20D8732618608CD,MD5=898277AC5894C4E1412A49040053B0D3,SHA256=445A2E800DC68DF89ABF713F3B4B632D40A
  - E6310EF366B842D974B0582426BC5,IMPHASH=E4E40938E4BF6C66424859ED02171C41
  - C:\Windows\System32\msisexec.exe
  - C:\Windows\System32\msisexec.exe /V



0 /72

Community Score -3

File distributed by Microsoft

445a2e800dc68df89abf713f3b4b632d40ae6310ef3660b42d974bb582426bc5

msiexec.exe

peexe idle known-distributor detect-debug-environment

Size 58.50 KB Last Analysis Date 9 days ago EXE

REANALYZE Similar More

DETECTION DETAILS RELATIONS BEHAVIOR COMMUNITY 8

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Security vendors' analysis

Acronis (Static ML)	Undetected	AhnLab-V3	Undetected
Alibaba	Undetected	AliCloud	Undetected
		Antiv-AVL	Undetected

Do you want to automate checks?

https://www.virustotal.com/gui/file/445a2e800dc68df89abf713f3b4b632d40ae6310ef3660b42d974bb582426bc5/relations

Type here to search

12:22 PM 7/17/2025

### Q3. Cloud Distribution Channel

- VirusTotal comments showed usage of Dropbox
- Event ID 15 revealed:
  - URL: [https://www.dropbox.com/s/...](https://www.dropbox.com/s/)

The image shows two side-by-side screenshots of a Windows desktop environment. The top half displays a Microsoft Edge browser window with the VirusTotal website open. The URL is <https://www.virustotal.com/gui/file/0cb44c4f8273750fa40497fca81e850f73927e70b13c8f80cdcf9d1478e6f3/community>. The analysis for the file `Fattura 2024.exe` (Size: 5.68 MB, Last Analysis Date: 2 days ago) shows a community score of 61. The bottom half shows a Splunk 9.4.3 search interface with the search bar containing `index="htb-unit42" Preventivo24`. The search results show 59 events from before 7/17/25 7:24:39.000 PM. The results table includes columns for Time and Event, with one event row expanded to show details: `2/14/24 02/13/2024 07:41:58 PM`, `3:41:58.000 AM`, `... 13 lines omitted ...`, `Message=technique_id=T1036,technique_name=Masquerading`, `2024-02-14 03:41:57.199`, `C:\Users\CyberJunkie\Downloads\Preventivo24.02.14.exe.exe`, and `DESKTOP-887GK2L\CyberJunkie`. The Splunk interface also includes a sidebar with 'SELECTED FIELDS' and 'INTERESTING FIELDS'.

Event		
	Time	
		C:\Users\CyberJunkie\Downloads\Preventivo24.02.14.exe.exe:Zone.Identifier 2024-02-14 03:41:26.459 Show all 20 lines host = DESKTOP-887GK2L   source = C:\Users\kali\Downloads\unit42\Microsoft-Windows-Sysmon\Operational.evtx sourcetype = WinEventLog:Microsoft-Windows-Sysmon/Operational
>	2/14/24 3:41:30.000 AM	02/13/2024 07:41:30 PM ... 14 lines omitted ... 2024-02-14 03:41:30.441 C:\Program Files\Mozilla Firefox\firefox.exe C:\Users\CyberJunkie\Downloads\Preventivo24.02.14.exe.exe 2024-02-14 03:41:26.459 Show all 22 lines host = DESKTOP-887GK2L   source = C:\Users\kali\Downloads\unit42\Microsoft-Windows-Sysmon\Operational.evtx sourcetype = WinEventLog:Microsoft-Windows-Sysmon/Operational
>	2/14/24 3:41:26.000 AM	02/13/2024 07:41:26 PM ... 14 lines omitted ... 2024-02-14 03:41:26.459 C:\Program Files\Mozilla Firefox\firefox.exe C:\Users\CyberJunkie\Downloads\Preventivo24.02.14.exe.exe 2024-02-14 03:41:26.459 Show all 20 lines host = DESKTOP-887GK2L   source = C:\Users\kali\Downloads\unit42\Microsoft-Windows-Sysmon\Operational.evtx sourcetype = WinEventLog:Microsoft-Windows-Sysmon/Operational
		source = WinEventLog:Microsoft-Windows-Sysmon/Operational
>	2/14/24 3:41:26.000 AM	02/13/2024 07:41:26 PM LogName=Microsoft-Windows-Sysmon/Operational EventCode=1 EventType=4 ComputerName=DESKTOP-887GK2L User=NOT_TRANSLATED Sid=S-1-5-18 SidType=0 SourceName=Microsoft-Windows-Sysmon Type=Information RecordNumber=118752 Keywords=None TaskCategory=11 OpCode=Info Message= 2024-02-14 03:41:26.459 C:\Program Files\Mozilla Firefox\firefox.exe C:\Users\CyberJunkie\Downloads\Preventivo24.02.14.exe.exe 2024-02-14 03:41:26.459 DESKTOP-887GK2L\CyberJunkie Collapse host = DESKTOP-887GK2L   source = C:\Users\kali\Downloads\unit42\Microsoft-Windows-Sysmon\Operational.evtx sourcetype = WinEventLog:Microsoft-Windows-Sysmon/Operational

New Search

index="htb-unit42" Preventivo24

4 events (2/14/24 3:41:21.000 AM to 2/14/24 3:41:31.001 AM) No Event Sampling ▾

Events (4) Patterns Statistics Visualization

Timeline format ▾ — Zoom Out + Zoom to Selection × Deselect 100 milliseconds per column

Format Show: 50 Per Page ▾ View: List ▾

Time	Event
2/14/24 3:41:30.000 AM	02/13/2024 07:41:30 PM ... 14 lines omitted ... 2024-02-14 03:41:30.472 C:\Program Files\Mozilla Firefox\firefox.exe C:\Users\ CyberJunkie\Downloads\Preventivo24.02.14.exe.exe:Zone.Identifier 2024-02-14 03:41:26.459 Show all 22 lines host = DESKTOP-887GK2L   source = C:\Users\kali\Downloads\unit42\Microsoft-Windows-Sysmon-Operational.evtx sourcetype = WinEventLog:Microsoft-Windows-Sysmon/Operational
2/14/24 3:41:30.000 AM	02/13/2024 07:41:30 PM ... 14 lines omitted ...

Selected Fields: a\_host 1, a\_source 1, a\_sourceType 1

Interesting Fields: a\_ComputerName 1, #\_EventCode 2, #\_EventType 1, a\_HostUrl 1, a\_IMPHASH 2

Type here to search

New Search

index="htb-unit42"

9 events (2/14/24 3:41:21:000 AM to 2/14/24 3:41:31:001 AM) No Event Sampling ▾

Events (9) Patterns Statistics Visualization

Timeline format Zoom Out + Zoom to Selection X Deselect 100 milliseconds per column

Format Show: 50 Per Page View: List

Time	Event
2/14/24 3:41:30:000 AM	02/13/2024 07:41:30 PM LogName=Microsoft-Windows-Sysmon/Operational EventCode=15 EventType=4 ComputerName=DESKTOP-887GK2L Show all 22 lines host = DESKTOP-887GK2L   source = C:\Users\kali\Downloads\unit42\Microsoft-Windows-Sysmon-Operational.evtx sourcetype = WinEventLog:Microsoft-Windows-Sysmon/Operational
2/14/24 3:41:30:000 AM	02/13/2024 07:41:30 PM LogName=Microsoft-Windows-Sysmon/Operational EventCode=11

Selected Fields

- host 1
- source 1
- sourcetype 1

Interesting Fields

- ComputerName 1
- EventCode 4
- EventType 1
- IMPHASH 2
- index 1

Screenshot of a Splunk search results page showing a single event from the Microsoft-Windows-Sysmon/Operational log. The event details a file creation operation on 2/14/24 at 3:41:26 AM. The event source is Microsoft-Windows-Sysmon/Operational, and the host is DESKTOP-887GK2L. The event ID is 11, and the type is Information. The file path is uc2f030016253ec53f4953980a4e.d1, and it was created by Mozilla Firefox on the user's desktop.

Screenshot of the Microsoft Learn article on Event ID 11: FileCreate. The article explains that file create operations are logged when a file is created or overwritten. It provides examples of monitoring autostart locations and download directories. A table maps Registry key names to abbreviations, including HKEY\_LOCAL\_MACHINE and HKLM.

When a consumer binds to a filter, this event logs the consumer name and filter path.

## Event ID 22: DNSEvent (DNS query)

This event is generated when a process executes a DNS query, whether the result is successful or fails, cached or not. The telemetry for this event was added for Windows 8.1 so it is not available on Windows 7 and earlier.

## Event ID 23: FileDelete (File Delete archived)

A file was deleted. Additionally to logging the event, the deleted file is also saved in the `ArchiveDirectory` (which is `C:\Sysmon` by default). Under normal operating conditions this directory might grow to an unreasonable size - see event ID 26: `FileDeleteDetected` for similar behavior but without saving the deleted files.

## Event ID 24: ClipboardChange (New content in the clipboard)

This event is generated when the system clipboard contents change.

i	Time	Event
	2/14/24 3:41:26 AM	sourceType = WinEventLog:Microsoft-Windows-Sysmon/Operational 02/13/2024 07:41:26 PM LogName=Microsoft-Windows-Sysmon/Operational EventCode=22 EventType=4 ComputerName=DESKTOP-887GK2L User=NOT_TRANSLATED Sid=S-1-5-18 SidType=0 SourceName=Microsoft-Windows-Sysmon Type=Information RecordNumber=118747 Keywords=None TaskCategory=22 OpCode=Info Message= 2024-02-14 03:41:25.269 uc2f030016253ec53f4953980a4e.d1.dropboxusercontent.com 0 type: 5 edge-block-www-env.dropbox-dns.com;::ffff:162.125.81.15;198.51.44.6;2620:4d:4000:6259:7:6:0:1;198.51.45.6;2a00:edc0: 6259:7:6::2;198.51.44.70;2620:4d:4000:6259:7:6:0:3;198.51.45.70;2a00:edc0:6259:7:6::4; C:\Program Files\Mozilla Firefox\firefox.exe DESKTOP-887GK2L\CyberJunkie Collapse host = DESKTOP-887GK2L   source = C:\Users\valh\Downloads\unit4\Microsoft.Windows.Sysmon.Operational.evtx

index="htb-unit42"

localhost:8000/en-US/app/search/search?q=search%20index%3D"htb-unit42"%display.page.search.mode=smart&dispatch.sample\_ratio=1&workload...

9 events (2/14/24 3:41:21.000 AM to 2/14/24 3:41:31.001 AM) No Event Sampling

Events (9) Patterns Statistics Visualization

Timeline format Zoom Out + Zoom to Selection X Deselect 100 milliseconds per column

Format Show: 50 Per Page View: List

Selected Fields:  
host 1 source 1 sourcetype 1

Interesting Fields:  
ComputerName 1 EventCode 4 EventType 1 IMPHASH 2 index 1 Keywords 1

Event

Time	Event
2/14/24 02/13/2024 07:41:30 PM 3:41:30.000 AM	LogName=Microsoft-Windows-Sysmon/Operational EventCode=15 EventType=4 ComputerName=DESKTOP-887GK2L User=NOT_TRANSLATED Sid=S-1-5-18 SidType=0 SourceName=Microsoft-Windows-Sysmon Type=Information RecordNumber=118755 Keywords=None

Event ID 14: RegistryEvent (Key and value Rename)

Registry key and value rename operations map to this event type, recording the new name of the key or value that was renamed.

Event ID 15: FileCreateStreamHash

This event logs when a named file stream is created, and it generates events that log the hash of the contents of the file to which the stream is assigned (the unnamed stream), as well as the contents of the named stream. There are malware variants that drop their executables or configuration settings via browser downloads, and this event is aimed at capturing that based on the browser attaching a Zone.Identifier "mark of the web" stream.

Event ID 16: ServiceConfigurationChange

This event logs changes in the Sysmon configuration - for example when the filtering rules are updated.

Event ID 17: PipeEvent (Pipe Created)

In this article

- Introduction
- Overview of Sysmon Capabilities
- Screenshots
- Usage
- Examples
- Events**
- Configuration files
- Configuration Entries
- Event filtering entries



```

Hack The Box : Hack The Box | Search | Splunk 9.4.3 | VirusTotal - File - 0cb44c4f82737 | Sysmon - Sysinternals | Microsoft | InPrivate
localhost:8000/en-US/app/search/search?q=search%20index%3D"htb-unit42"&display.page.search.mode=smart&dispatch.sample_ratio=1&workload...
Show: 50 Per Page | View: List

INTERESTING FIELDS
a ComputerName 1
# EventCode 4
# EventType 1
# IMPHASH 2
a Index 1
a Keywords 1
# linecount 3
a LogName 1
a MD5 3
a Message 8
a OpCode 1
a punct 5
# RecordNumber 9
a SHA1 3
a SHA256 3
a Sid 1
# SidType 1
a SourceName 1
a splunk_server 1
# TaskCategory 4
a Type 1
a User 1
5 more fields
+ Extract New Fields

Time | Event
i | SidType=0
SourceName="Microsoft-Windows-Sysmon"
Type=Information
RecordNumber=118755
Keywords=None
TaskCategory=15
 OpCode=Info
Message=technique_id=T1189,technique_name=Drive-by Compromise
2024-02-14 03:41:30.472
C:\Program Files\Mozilla Firefox\firefox.exe
C:\Users\CyberJunkie\Downloads\Preventivo24.02.14.exe.exe:Zone.Identifier
2024-02-14 03:41:26.459
SHA1=2CFE549E80EB113DFAD2E7702637C1772ACFDBE6,MD5=41F87E73FB8EA503B335EBC3B3B70FAE,SHA256=5607425CF7DCB090216F4531D099FD78019
3899383CB3441017E3615E03068B,IMPHASH=00000000000000000000000000000000
[ZoneTransfer] ZoneId=3 RefererUrl=https://www.dropbox.com/ HostUrl=https://ucf030016253ec53f4953980a4e.d1.dropboxusercontent.com/cd/0/get/CNN1OCYTD8cqLXFQzXaeYHRKhG_PoR35Et2T0_IkqE5ijvkTAQNIjV7ZKk2FLXWI2bJy944RnwKttvnNlpVd5olp8cffnvnl_IfEjzr65j
ZZUOxtWA5rsGJ1jc9112LlHVAJhgRhjpZYLtGo83_QbeInB7x2oEoYg-JLF54zbhzi/file#DESKTOP-887GK2L\CyberJunkie
Collapse
host = DESKTOP-887GK2L | source = C:\Users\wall\Downloads\unit42\Microsoft-Windows-Sysmon-Operational.evtx |
sourcetype = WinEventLog:Microsoft-Windows-Sysmon/Operational

2/14/24 02/13/2024 07:41:30 PM | LogName=Microsoft-Windows-Sysmon/Operational
3:41:30.000 AM | EventCode=11
EventTime=4

```

## Q4. PDF File Timestamping

- **Event ID:** 2 (file time modification)
- **Timestamp:** 2024-01-14 08:10:06

The following are examples of each event type that Sysmon generates.

## Event ID 1: Process creation

The process creation event provides extended information about a newly created process. The full command line provides context on the process execution. The `ProcessGUID` field is a unique value for this process across a domain to make event correlation easier. The hash is a full hash of the file with the algorithms in the `HashType` field.

## Event ID 2: A process changed a file creation time

The change file creation time event is registered when a file creation time is explicitly modified by a process. This event helps tracking the real creation time of a file. Attackers may change the file creation time of a backdoor to make it look like it was installed with the operating system. Note that many processes legitimately change the creation time of a file; it does not necessarily indicate malicious activity.

## Event ID 3: Network connection

In this article

- Introduction
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- Events**
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Type here to search

Former Dodgers pitc... 12:47 PM 7/17/2025

localhost:8000/en-US/app/search/search?q=search%20index%3Dhtb-unit42%20EventCode%3D2&display.page.search.mode=smart&dispatch.sample=1

InPrivate

**New Search**

index="htb-unit42" EventCode=2

16 events (before 7/17/25 7:49:12.000 PM) No Event Sampling

Events (16) Patterns Statistics Visualization

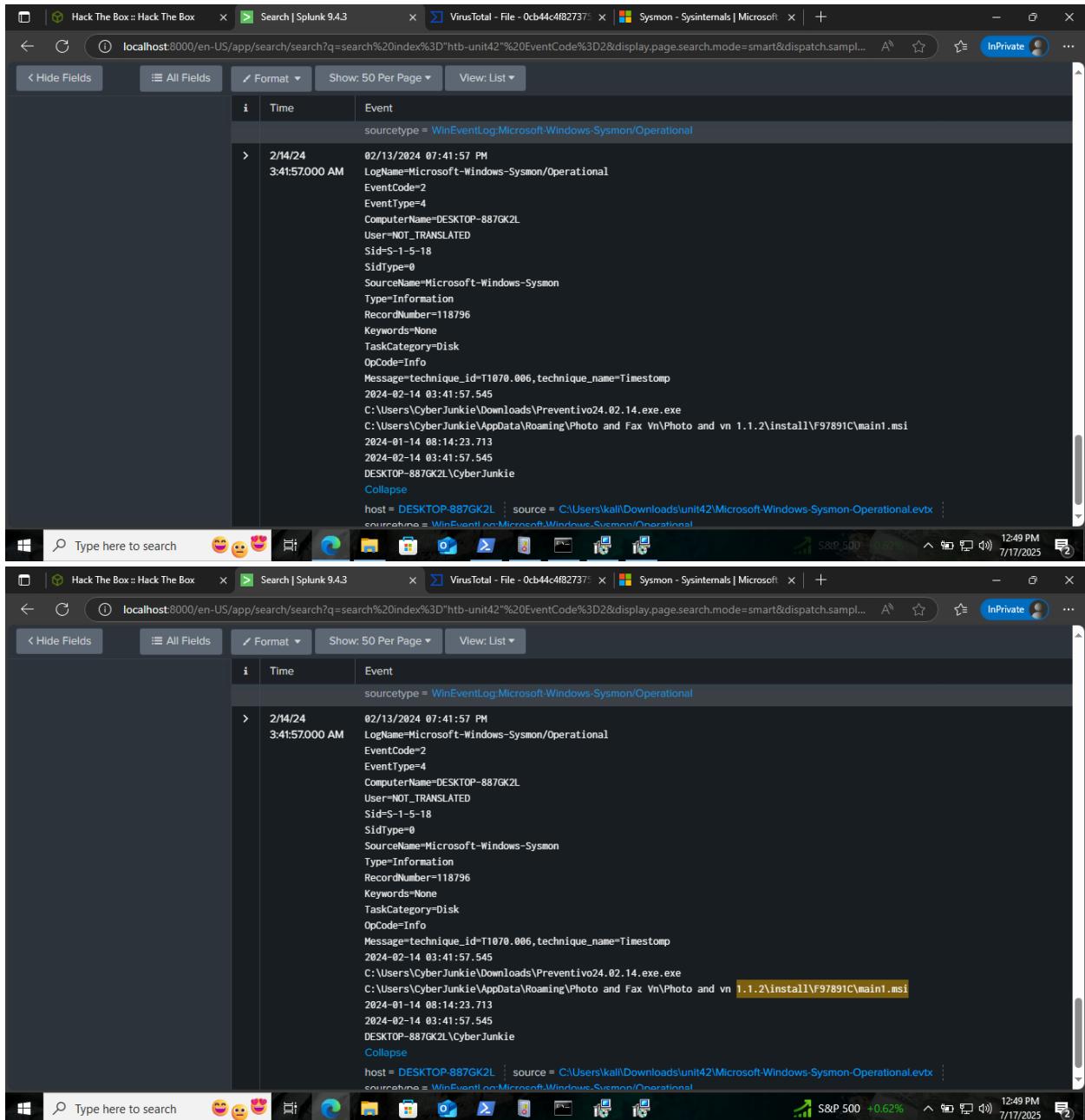
Timeline format Zoom Out + Zoom to Selection Deselect

Format Show: 50 Per Page View: List

Time	Event
2/14/24 3:41:58.000 AM	02/13/2024 07:41:58 PM LogName=Microsoft-Windows-Sysmon/Operational EventCode=2 EventType=4 ComputerName=DESKTOP-887GK2L Show all 21 lines host = DESKTOP-887GK2L   source = C:\Users\kali\Downloads\unit42\Microsoft-Windows-Sysmon-Operational.evtx

Type here to search

12:49 PM 7/17/2025



Event		
	Time	sourceType = WinEventLog:Microsoft-Windows-Sysmon/Operational
	2/14/24 3:41:57:000 AM	02/13/2024 07:41:57 PM LogName=Microsoft-Windows-Sysmon/Operational EventCode=2 EventType=4 ComputerName=DESKTOP-887GK2L User=NOT_TRANSLATED Sid=S-1-5-18 SidType=8 SourceName=Microsoft-Windows-Sysmon Type=Information RecordNumber=118796 Keywords=None TaskCategory=Disk OpCode=Info Message=technique_id="T1070.006",technique_name=Timestamp 2024-02-14 03:41:57.545 C:\Users\...\\Downloads\\Preventivo24.02.14.exe.exe C:\Users\...\\AppData\\Roaming\\Photo and Fax Vn\\Photo and Fax Vn 1.1.2\\install\\F97891C\\main1.msi 2024-01-14 08:14:23.713 2024-02-14 03:41:57.545 DESKTOP-887GK2L\\CyberJunkie Collapse host = DESKTOP-887GK2L   source = C:\Users\...\\Downloads\\unit42\\Microsoft-Windows-Sysmon-Operational.evtx sourceType = WinEventLog:Microsoft-Windows-Sysmon/Operational

Splunk > enterprise Apps ▾

Administrator ▾ Messages ▾ Settings ▾ Activity ▾ Help ▾ Find ▾

Search Analytics Datasets Reports Alerts Dashboards

New Search

index="htb-unit42" EventCode=2 pdf

1 event (before 7/17/25 7:49:53.000 PM) No Event Sampling ▾

Events (1) Patterns Statistics Visualization

Timeline format ▾ Zoom Out + Zoom to Selection Deselect 1 millisecond per column

Format ▾ Show: 50 Per Page ▾ View: List ▾

Selected Fields

- a host 1
- a source 1
- a sourcetype 1

Interesting Fields

- a ComputerName 1

	Time	Event
>	2/14/24 3:41:58.000 AM	02/13/2024 07:41:58 PM ... 14 lines omitted ... 2024-02-14 03:41:58.404 C:\Users\ CyberJunkie\Downloads\Preventivo24.02.14.exe.exe C:\Users\ CyberJunkie\AppData\Roaming\Photo and Fax\Photo and vn 1.1.2\install\F97891C\TempFolder\~.pdf 2024-01-14 08:10:06.029

Show all 21 lines

Type here to search

S & P 500 +0.62% 12:49 PM 7/17/2025

Splunk > enterprise Apps ▾

Administrator ▾ Messages ▾ Settings ▾ Activity ▾ Help ▾ Find ▾

Search | Splunk 9.4.3

localhost:8000/en-US/app/search/search?q=search%20index%3D"htb-unit42"%20EventCode%3D2%20pdf&display.page=search.mode=smart&dispatch...

VirusTotal - File - 0cb44c4f82737... | Sysmon - Sysinternals | Microsoft

New Search

index="htb-unit42" EventCode=2 pdf

1 event (before 7/17/25 7:49:53.000 PM) No Event Sampling ▾

Events (1) Patterns Statistics Visualization

Timeline format ▾ Zoom Out + Zoom to Selection Deselect 1 millisecond per column

Format ▾ Show: 50 Per Page ▾ View: List ▾

Selected Fields

- a host 1
- a source 1
- a sourcetype 1

Interesting Fields

- a ComputerName 1
- # EventCode 1
- # EventType 1
- a index 1
- a Keywords 1
- # linecount 1
- a LogName 1
- a Message 1
- a OpCode 1
- a punct 1
- # RecordNumber 1
- a Sid 1
- # SidType 1
- a SourceName 1
- a splunk\_server 1
- a TaskCategory 1
- a technique\_name 1
- a Type 1
- a User 1

+ Extract New Fields

	Time	Event
>		EventCode=2 EventType=4 ComputerName=DESKTOP-887GK2L User=NOT_TRANSLATED Sid=S-1-5-18 SidType=8 SourceName=Microsoft-Windows-Sysmon Type=Information RecordNumber=118850 Keywords=None TaskCategory=Disk OpCode=Info Message=technique_id=T1070.006,technique_name=Timestamp 2024-02-14 03:41:58.404 C:\Users\ CyberJunkie\Downloads\Preventivo24.02.14.exe.exe C:\Users\ CyberJunkie\AppData\Roaming\Photo and Fax\Photo and vn 1.1.2\install\F97891C\TempFolder\~.pdf 2024-01-14 08:10:06.029 2024-02-14 03:41:58.404 DESKTOP-887GK2L\ CyberJunkie Collapse host = DESKTOP-887GK2L   source = C:\Users\kali\Downloads\unit42\Microsoft-Windows-Sysmon-Operational.evtx   sourcetype = WinEventLog:Microsoft-Windows-Sysmon/Operational

Type here to search

S & P 500 +0.62% 12:50 PM 7/17/2025

## Q5. Malicious Script Path

- **Detected:** once.cmd script
  - **Path:** C:\Users\cyberjunkie\AppData\Roaming\Photo & Facts\once.cmd

index="htb-unit42" EventCode=11 once.cmd

2 events (before 7/17/25 7:53:49.000 PM) No Event Sampling

Events (2) Patterns Statistics Visualization

Time 2/14/24 02/13/2024 07:41:58 PM

Event

2/14/24 02/13/2024 07:41:58 PM

3:41:58.000 AM

... 14 lines omitted ...

2024-02-14 03:41:58.577

C:\Windows\system32\msiexec.exe

C:\Games\once.cmd

2024-02-14 03:41:58.577

Show all 20 lines

Time 2/14/24 02/13/2024 07:41:58 PM

Event

2/14/24 02/13/2024 07:41:58 PM

3:41:58.000 AM

sourceType = WinEventLog:Microsoft-Windows-Sysmon/Operational

EventCode=11

EventType=4

ComputerName=DESKTOP-887GK2L

User=NOT\_TRANSLATED

Sid=S-1-5-18

SidType=0

SourceName=Microsoft-Windows-Sysmon

Type=Information

RecordNumber=118846

Keywords=None

TaskCategory=11

OpCode=Info

Message=

2024-02-14 03:41:58.404

C:\Users\ CyberJunkie\Downloads\Preventivo24.02.14.exe.exe

C:\Users\ CyberJunkie\AppData\Roaming\Photo and Fax\vn\Photo and Fax 1.1.2\install\F97891C\WindowsVolume\Games\once.cmd

2024-02-14 03:41:58.404

DESKTOP-887GK2L\ CyberJunkie

Collapse

host = DESKTOP-887GK2L source = C:\Users\valh\Downloads\unit42\Microsoft-Windows-Sysmon-Operational.evtx

sourceType = WinEventLog:Microsoft-Windows-Sysmon/Operational

## Q6. Dummy Domain Check

- DNS query to `www.example.com`
- Seen in Event ID 22 (likely used for C2 connectivity test)

localhost:8000/en-US/app/search/search?q=search%20index%3D"htb-unit42"%20EventCode%3D22%20preventivo24&display.page.search.mode=sm... InPrivate

Selected Fields:

- a host 1
- a source 1
- a sourcetype 1

Interesting Fields:

- a ComputerName 1
- # EventCode 1
- # EventType 1
- a index 1
- a Keywords 1
- # linecount 1
- a LogName 1
- a Message 1
- a OpCode 1
- a punct 1
- # RecordNumber 1
- a Sid 1
- # SidType 1
- a SourceName 1
- a splunk\_server 1
- # TaskCategory 1
- a Type 1
- a User 1

+ Extract New Fields

Time: Event

EventCode=22  
EventType=4  
ComputerName=DESKTOP-887GK2L  
User=NOT\_TRANSLATED  
Sid=S-1-5-18  
SidType=0  
SourceName=Microsoft-Windows-Sysmon  
Type=Information  
RecordNumber=118906  
Keywords=None  
TaskCategory=22  
OpCode=Info  
Message=-  
2024-02-14 03:41:56.955  
www.example.com  
0  
::ffff:93.184.216.34;199.43.135.53;2001:500:8f::53;199.43.133.53;2001:500:8d::53;  
C:\Users\ CyberJunkie\Downloads\Preventivo24.02.14.exe.exe  
DESKTOP-887GK2L\ CyberJunkie  
Collapse

host = DESKTOP-887GK2L | source = C:\Users\ kall\Downloads\unit42\Microsoft-Windows-Sysmon-Operational.evtx | sourcetype = WinEventLog:Microsoft-Windows-Sysmon/Operational

localhost:8000/en-US/app/search/search?q=search%20index%3D"htb-unit42"%20EventCode%3D22%20preventivo24&display.page.search.mode=sm... InPrivate

splunk>enterprise Apps

Administrator Messages Settings Activity Help Find

New Search

index="htb-unit42" EventCode=22 preventivo24

1 event (before 7/17/25 7:57:36.000 PM) No Event Sampling

Events (1) Patterns Statistics Visualization

Timeline format Zoom Out + Zoom to Selection Deselect

Format Show: 50 Per Page View: List

Selected Fields:

- a host 1
- a source 1
- a sourcetype 1

Interesting Fields:

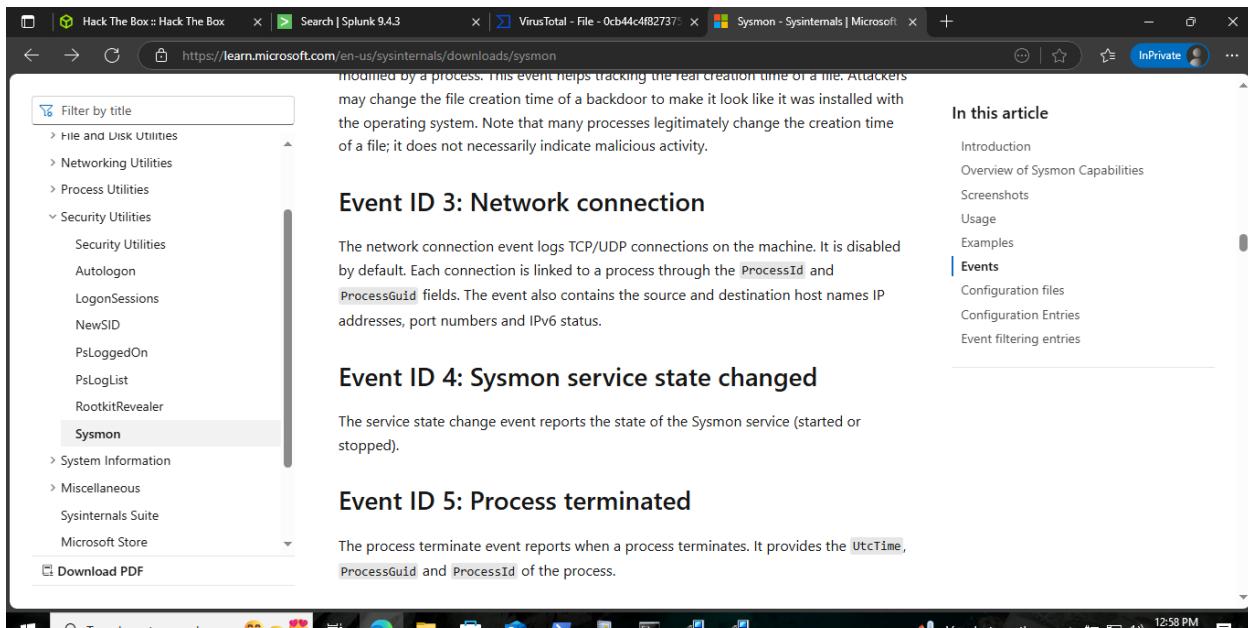
- a ComputerName 1

Time: Event

2/14/24 02/13/2024 07:41:58 PM  
3:41:58.000 AM LogName=Microsoft-Windows-Sysmon/Operational  
EventCode=22  
EventType=4  
ComputerName=DESKTOP-887GK2L  
User=NOT\_TRANSLATED  
Sid=S-1-5-18

## Q7. Malicious IP Contact

- Event ID 3 (network connection)
- **Destination IP:** 93.184.216.34



Event ID 3: Network connection

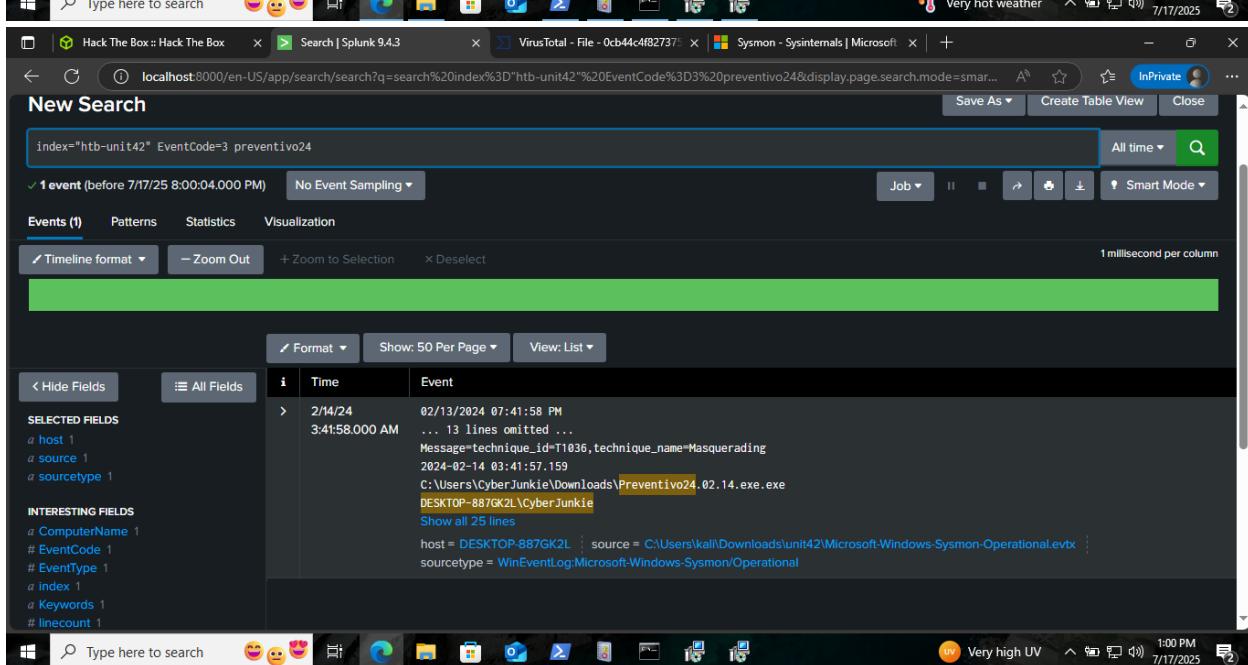
The network connection event logs TCP/UDP connections on the machine. It is disabled by default. Each connection is linked to a process through the `ProcessId` and `ProcessGuid` fields. The event also contains the source and destination host names IP addresses, port numbers and IPv6 status.

Event ID 4: Sysmon service state changed

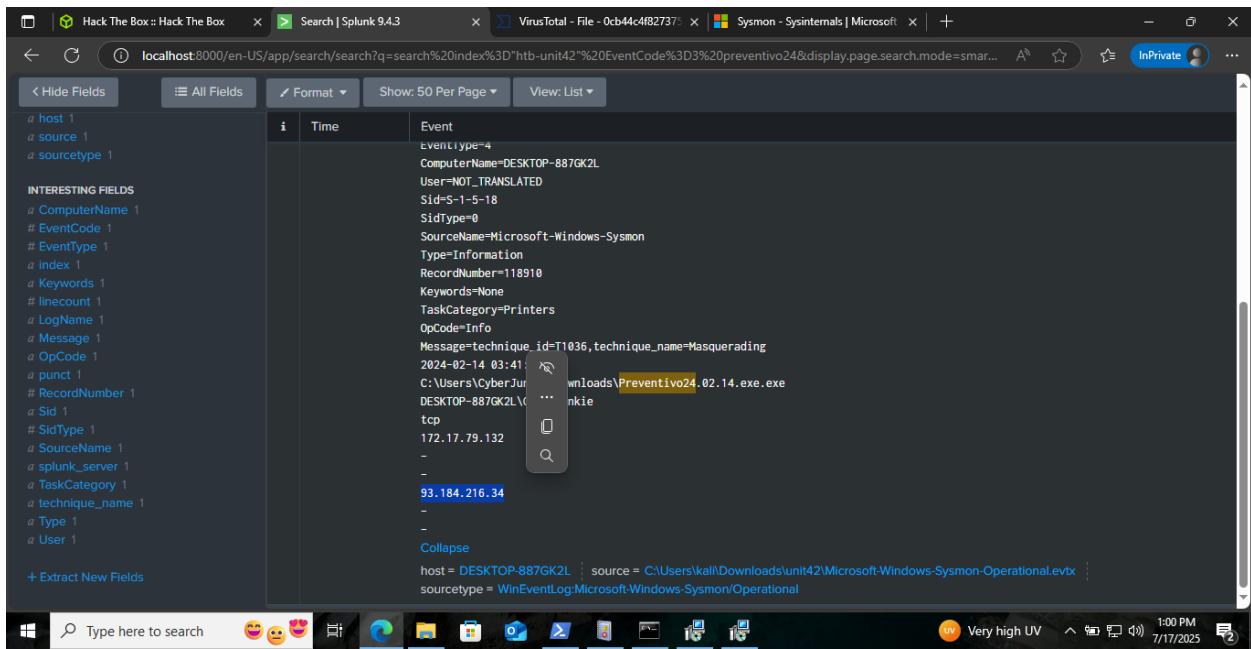
The service state change event reports the state of the Sysmon service (started or stopped).

Event ID 5: Process terminated

The process terminate event reports when a process terminates. It provides the `UtcTime`, `ProcessGuid` and `ProcessId` of the process.



Time	Event
2/14/24 3:41:58:000 AM	02/13/2024 07:41:58 PM ... 13 lines omitted ... Message=technique_id=T1036,technique_name=Masquerading 2024-02-14 03:41:57.159 C:\Users\CyberJunkie\Downloads\Preventivo24.0.14.exe DESKTOP-887GK2L\CyberJunkie Show all 25 lines host = DESKTOP-887GK2L   source = C:\Users\Wall\Downloads\unit42\Microsoft-Windows-Sysmon-Operational.evtx sourcetype = WinEventLog:Microsoft-Windows-Sysmon/Operational



localhost:8000/en-US/app/search/search?q=search%20index%3D"htb-unit42"%20EventCode%3D3%20preventivo24&display.page.search.mode=smart... A InPrivate

Event

eventtype=4

ComputerName=DESKTOP-887GK2L

User=NOT\_TRANSLATED

Sid=S-1-5-18

SidType=0

SourceName=Microsoft-Windows-Sysmon

Type=Information

RecordNumber=118910

Keywords=None

TaskCategory=Printers

OpCode=Info

Message=technique\_id=T1036,technique\_name=Masquerading

2024-02-14 03:41:58

C:\Users\CyberJunk\Downloads\Preventivo24.02.14.exe.exe

DESKTOP-887GK2L\...nkie

tcp

172.17.79.132

-

-

93.184.216.34

-

-

**93.184.216.34**

**host = DESKTOP-887GK2L | source = C:\Users\wall\Downloads\unit42\Microsoft-Windows-Sysmon-Operational.evtx | sourcetype = WinEventLog:Microsoft-Windows-Sysmon/Operational**

+ Extract New Fields

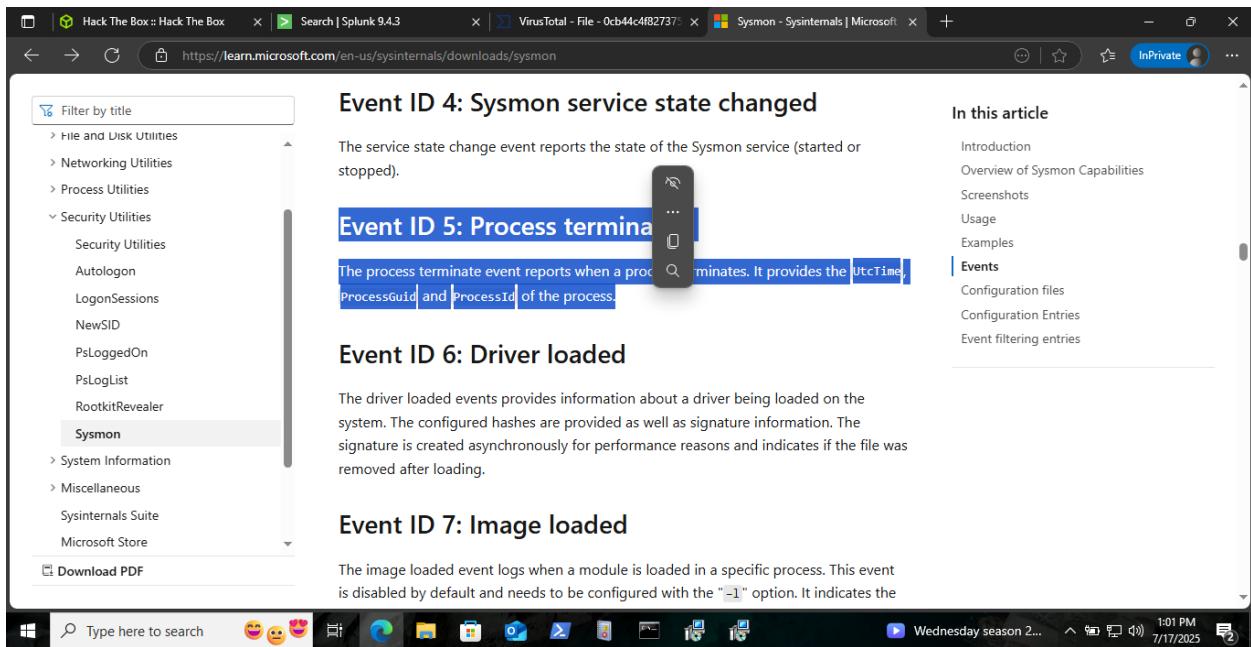
Time

INTERESTING FIELDS

a host 1  
a source 1  
a sourcetype 1  
  
a ComputerName 1  
# EventCode 1  
# EventType 1  
a index 1  
a Keywords 1  
# linecount 1  
a LogName 1  
a Message 1  
a OpCode 1  
a punct 1  
# RecordNumber 1  
a Sid 1  
# SidType 1  
a SourceName 1  
a splunk\_server 1  
a TaskCategory 1  
a technique\_name 1  
a Type 1  
a User 1

## Q8. Process Termination Time

- **Event ID: 5**
- **Time: 2024-02-14 03:41:58**



Event ID 4: Sysmon service state changed

The service state change event reports the state of the Sysmon service (started or stopped).

Event ID 5: Process terminated

The process terminate event reports when a process terminates. It provides the `ProcessGuid` and `ProcessId` of the process.

Event ID 6: Driver loaded

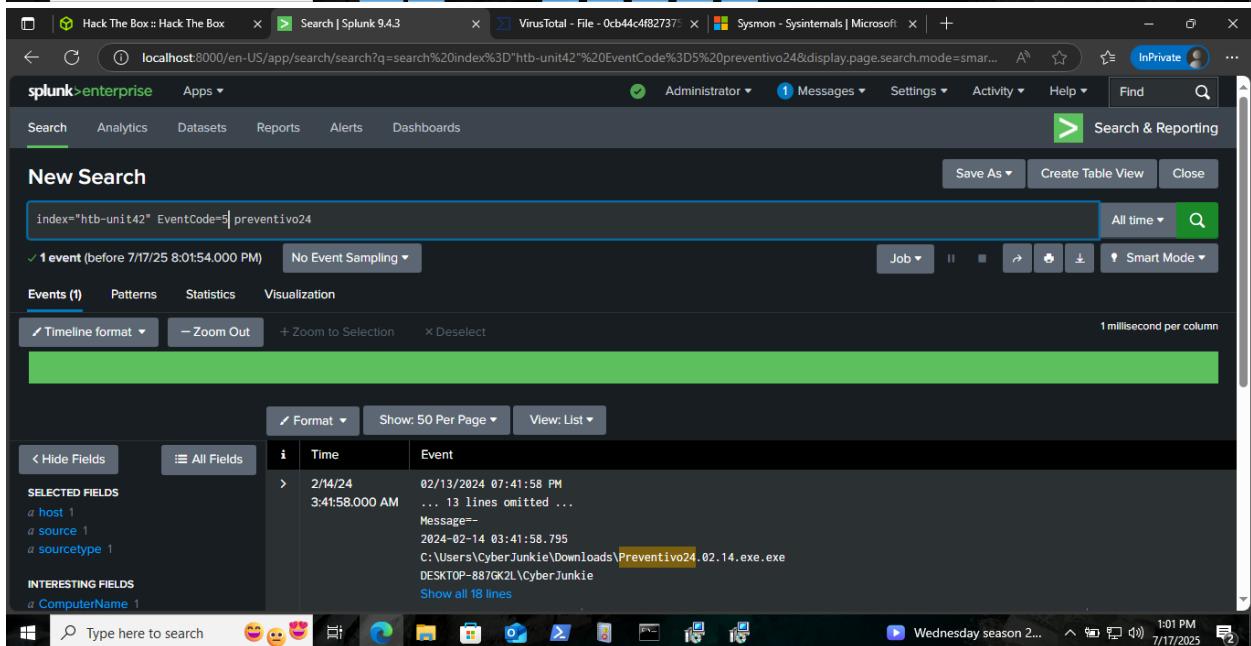
The driver loaded events provides information about a driver being loaded on the system. The configured hashes are provided as well as signature information. The signature is created asynchronously for performance reasons and indicates if the file was removed after loading.

Event ID 7: Image loaded

The image loaded event logs when a module is loaded in a specific process. This event is disabled by default and needs to be configured with the `-1` option. It indicates the

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localhost:8000/en-US/app/search/search?q=search%20index%3D"htb-unit42"%20EventCode%3D5%20preventivo24&display.page.search.mode=sma...

New Search

index="htb-unit42" EventCode=5 preventivo24

1 event (before 7/17/25 8:01:54.000 PM) No Event Sampling ▾

Events (1) Patterns Statistics Visualization

Timeline format ▾ Zoom Out ▾ Zoom to Selection ▾ Deselect

Time	Event
2/14/24 3:41:58.000 AM	02/13/2024 07:41:58 PM ... 13 lines omitted ... Message= 2024-02-14 03:41:58.795 C:\Users\CyberJunkie\Downloads\Preventivo24.02.14.exe.exe DESKTOP-887GK2L\CyberJunkie Show all 18 lines

The screenshot shows a Windows desktop with several browser tabs open. The tabs include 'Hack The Box :: Hack The Box', 'Search | Splunk 9.4.3', 'VirusTotal - File - 0cb44c4f82737...', and 'Sysmon - Sysinternals | Microsoft...'. The Splunk interface is visible, showing a log entry for a file download from 'C:\Users\CyberJunkie\Downloads\Preventivo24.02.14.exe'. The desktop taskbar at the bottom has icons for File Explorer, Task View, and other system utilities. The system tray shows the date as 7/17/2025, the time as 1:02 PM, and the weather as 95°F Sunny.



## Key Techniques & Concepts Practiced

Tool	Purpose
Sysmon	Deep endpoint visibility via EID
Splunk	Time-aligned correlation using SPL queries
VirusTotal	IOC triage, domain/IP/EXE reputation checking



## Key Lessons & Recommendations

- **Always validate log ingestion.** Misparsed logs can cause false negatives, wasting analyst time and delaying detection.
- **Use multiple Event IDs together.** Pivoting from process creation → file write → DNS → network activity builds strong timeline context.
- **Practice “threat hypothesis” mindset.** Every query should ask a question: *What could this file be doing? Who ran it? Where did it come from?*
- **Repeat labs regularly.** Just like Stephen says, repetition hardens investigative instincts.



## Summary

This lab sharpened my skills in real-world log triage using Sysmon and Splunk. It emphasized the importance of **data integrity, log enrichment, and contextual analysis** — all key skills for SOC Tier 1/2 analysts.

