

In order to work with antivirus and logs, we will add a new agent.

Agent 3.

```
1 OS: Microsoft Windows 10 Pro 10.0.19042
2 IP: 192.168.128.89
3 Name: B70017351361129
```

The chosen antivirus is Kaspersky, is the one that we found that best matches with the functionalities that Wazuh provide us.

First we have to identify where are the Kaspersky logs and events.

Unlike other antivirus, we can find his monitoring in *Windows Events Viewer > Applications and Services Logs > Kaspersky Endpoint Security*. This will be the reference of our channel in Wazuh.

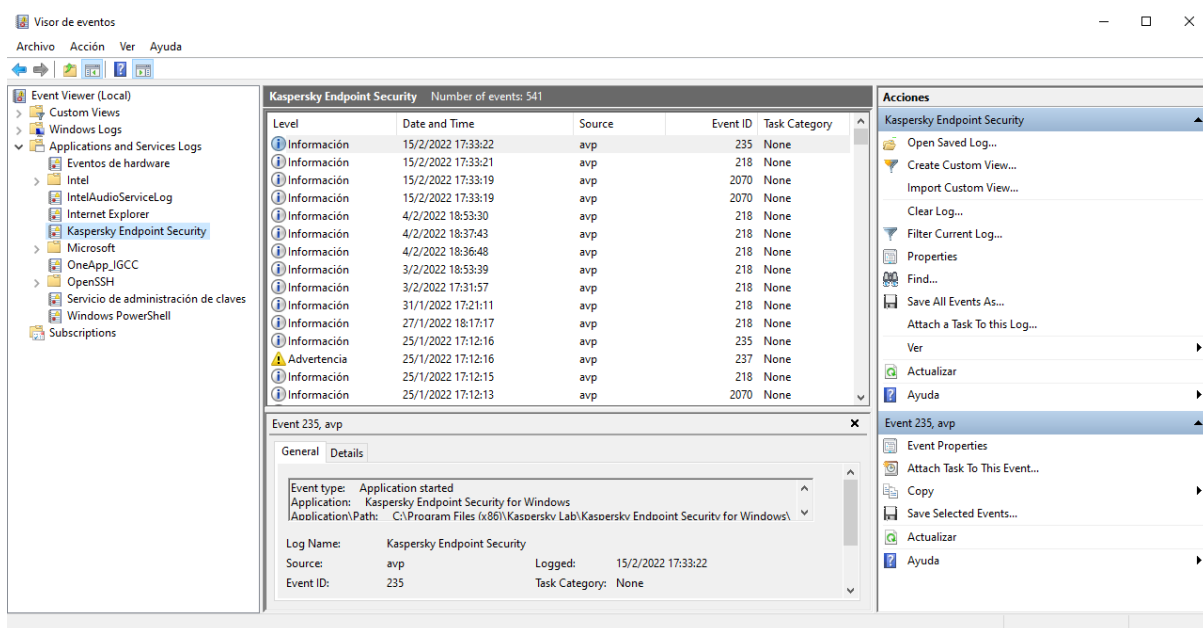


Figure 1: “Events viewer”

The next point is add this reference in our agent *ossec.conf*. We can also add this information in the wazuh manager if we have this agent in a group.

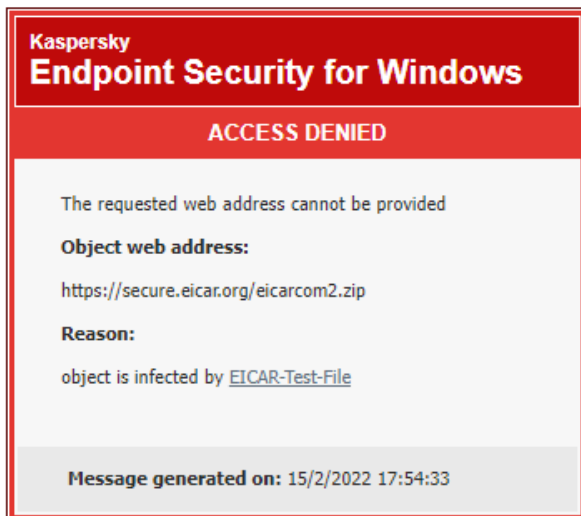
```
1 <localfile>
2 <location>Kaspersky Endpoint Security</location>
3 <log_format>eventchannel</log_format>
4 </localfile>
```

Now we save and restart the Wazuh agent service.

To check if it works, we will force Kaspersky alerts that will add events that we will capture and we will be able to monitor in our Wazuh manager. We can do it accessing to these files in our navigator:

- <https://secure.eicar.org/eicar.com>
- <https://secure.eicar.org/eicar.com.txt>
- https://secure.eicar.org/eicar_com.zip

- <https://secure.eicar.org/eicarcom2.zip>



If we go to the *Security events* screen of our agent we can monitor these events and see the events that we force.

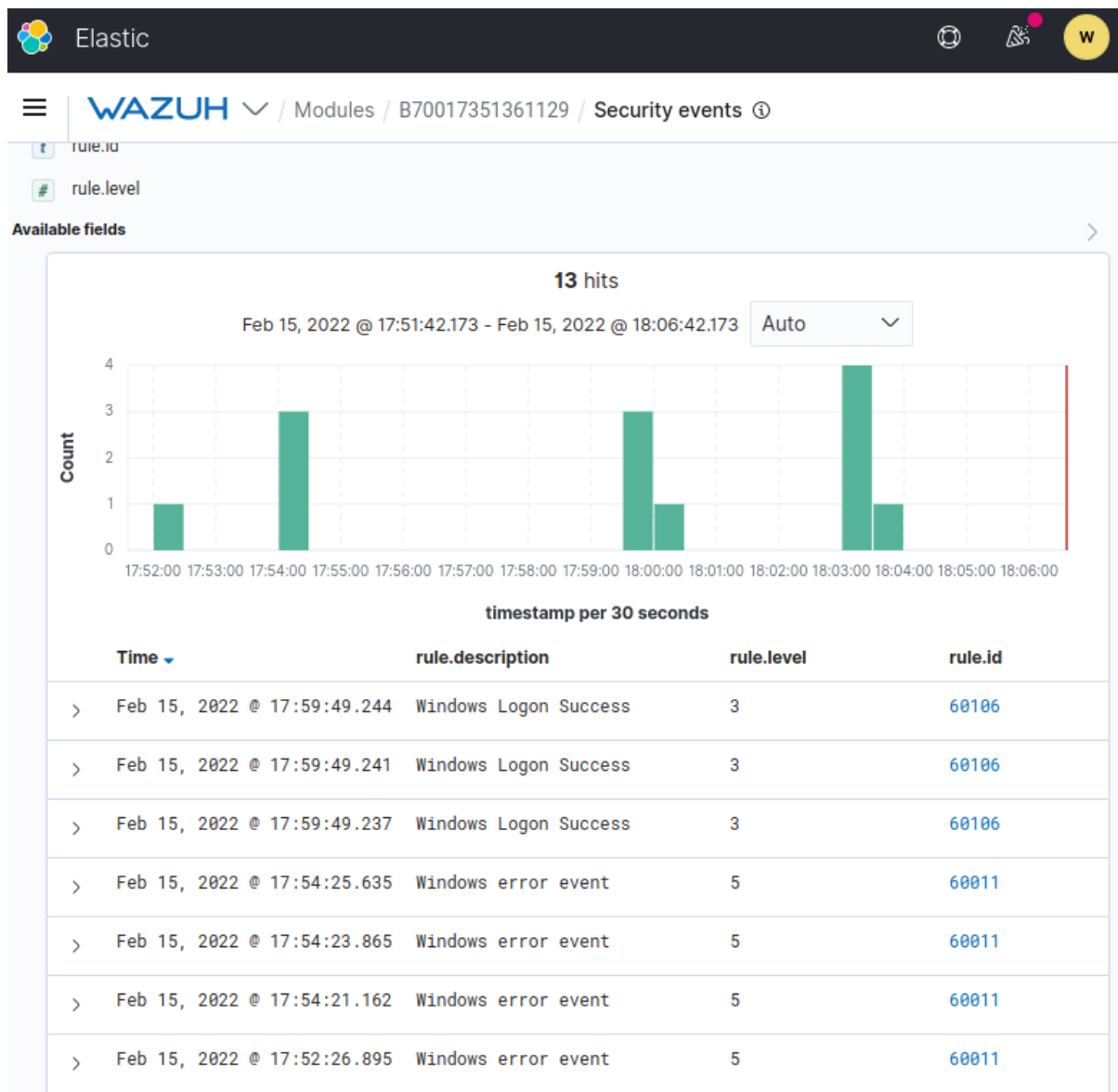


Figure 2: "Security events"

To see only the Kaspersky events we can add a custom filter.

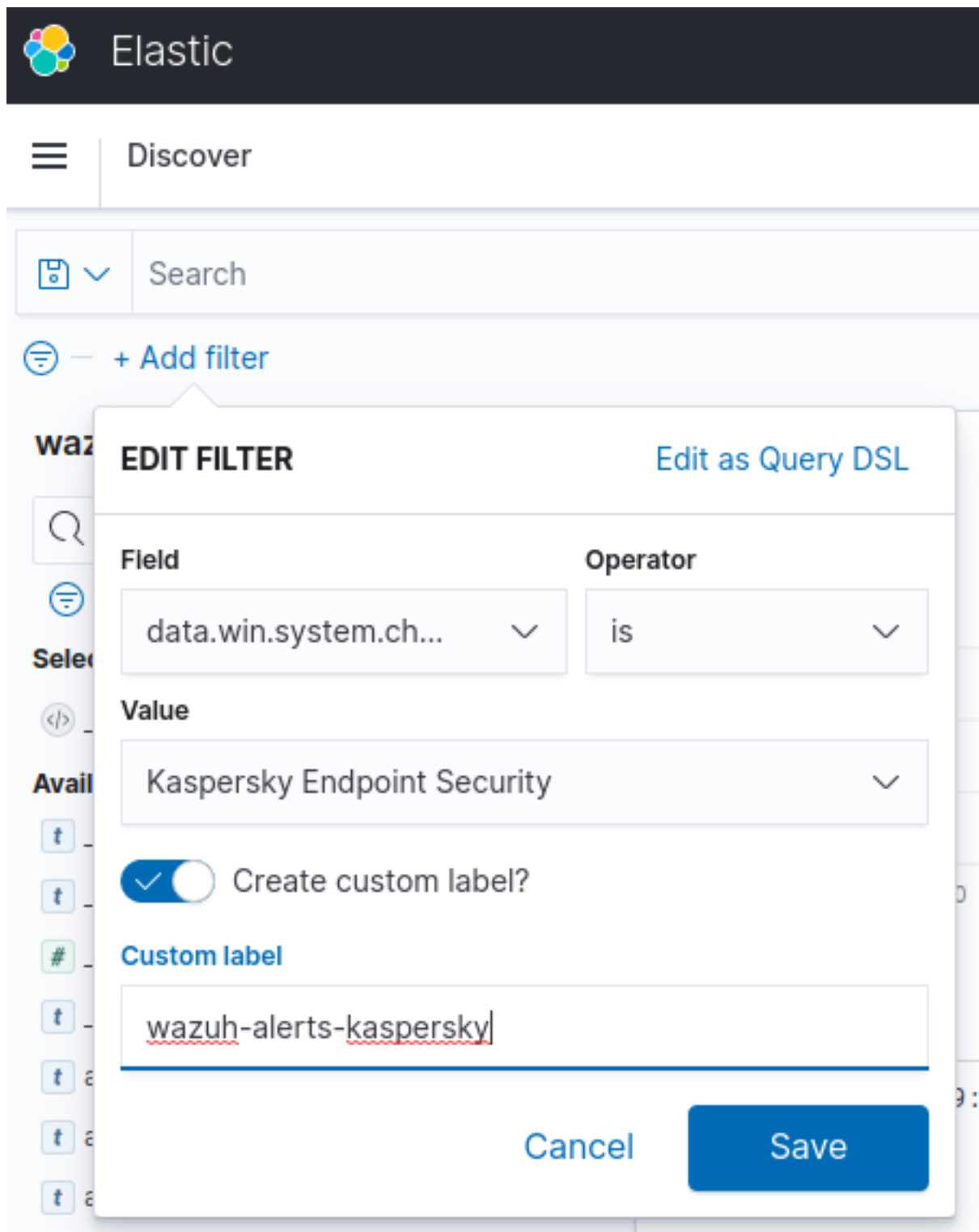


Figure 3: “Add filter”

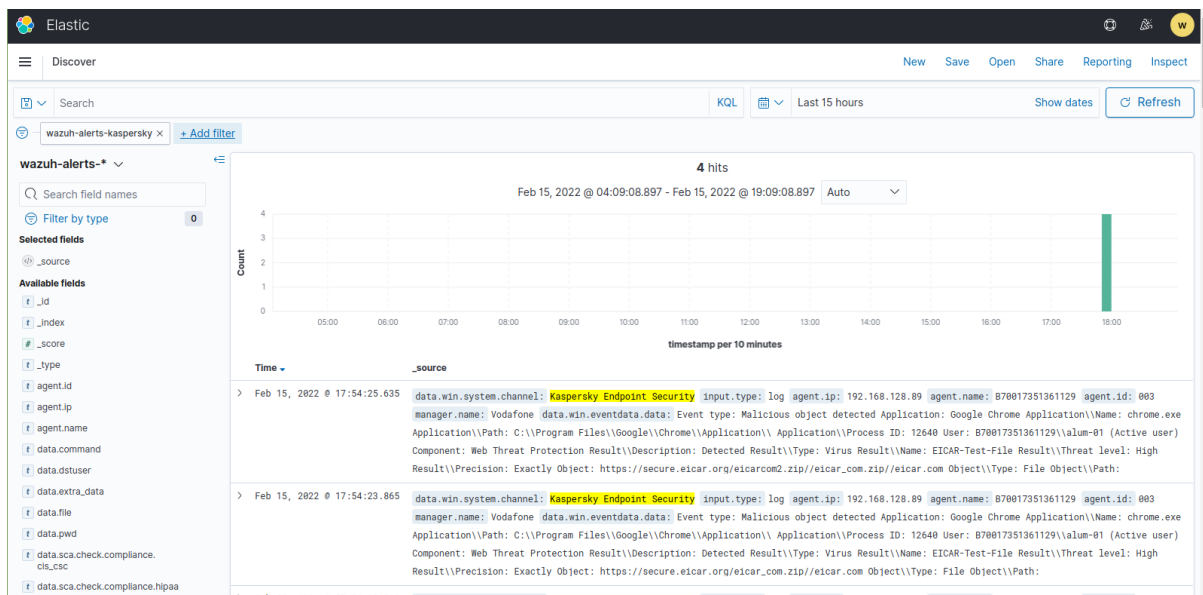


Figure 4: “Filtered logs”

The events can be exported in JSON format.

Attached the exported information:

```

1 {
2   "_index": "wazuh-alerts-4.x-2022.02.15",
3   "_type": "_doc",
4   "_id": "rZxO_n4BMzeLMS_HizTP",
5   "_version": 1,
6   "_score": null,
7   "_source": {
8     "input": {
9       "type": "log"
10    },
11    "agent": {
12      "ip": "192.168.128.89",
13      "name": "B70017351361129",
14      "id": "003"
15    },
16    "manager": {
17      "name": "Vodafone"
18    },
19    "data": {
20      "win": {
21        "eventdata": {
22          "data": "Event type:      Malicious object detected
Application:      Google Chrome Application\\Name:
chrome.exe Application\\Path:      C:\\Program Files
\\Google\\Chrome\\Application\\ Application\\
Process ID:      12640 User:      B70017351361129\\alum-01 (Active user) Component:      Web Threat Protection
Result\\Description:      Detected Result\\Type:
Virus Result\\Name:      EICAR-Test-File Result\\
Threat level:      High Result\\Precision:      Exactly
Object:      https://secure.eicar.org/eicarcom2.zip//
eicar_com.zip//eicar.com Object\\Type:      File Object

```

```

        \\\Path:      https://secure.eicar.org/eicarcom2.zip//
        eicar_com.zip//eicar.com Object\\\Name:      eicar.com
        Reason:      Expert analysis Database release date:
        24/9/2021 13:20:00 Hash:      275
        a021bbfb6489e54d471899f7db9d1663fc695ec2fe2a2c4538aabf651fd0f
        "
23     },
24     "system": {
25         "eventID": "302",
26         "keywords": "0x8000000000000000",
27         "level": "2",
28         "channel": "Kaspersky Endpoint Security",
29         "opcode": "0",
30         "message": "\"Event type:      Malicious object detected\\
        nApplication:      Google Chrome\\nApplication\\Name:
        chrome.exe\\nApplication\\Path:      C:\\Program Files\\
        Google\\Chrome\\Application\\nApplication\\Process ID:
        12640\\nUser:      B70017351361129\\alum-01 (Active
        user)\\nComponent:      Web Threat Protection\\nResult\\
        Description:      Detected\\nResult\\Type:      Virus\\
        nResult\\Name:      EICAR-Test-File\\nResult\\Threat level:
        High\\nResult\\Precision:      Exactly\\nObject:
        https://secure.eicar.org/eicarcom2.zip//eicar_com.zip//
        eicar.com\\nObject\\Type:      File\\nObject\\Path:
        https://secure.eicar.org/eicarcom2.zip//eicar_com.zip//
        eicar.com\\nObject\\Name:      eicar.com\\nReason:
        Expert analysis\\nDatabase release date:      24/9/2021
        13:20:00\\nHash:      275
        a021bbfb6489e54d471899f7db9d1663fc695ec2fe2a2c4538aabf651fd0f
        \\n\"",
31         "version": "0",
32         "systemTime": "2022-02-15T16:54:33.6036745Z",
33         "eventRecordID": "545",
34         "threadID": "0",
35         "computer": "B70017351361129",
36         "task": "0",
37         "processID": "0",
38         "severityValue": "ERROR",
39         "providerName": "avp"
40     }
41 }
42 },
43 "rule": {
44     "firedtimes": 4,
45     "mail": false,
46     "level": 5,
47     "description": "Windows error event",
48     "groups": [
49         "windows",
50         "system_error"
51     ],
52     "id": "60011",
53     "gpg13": [
54         "4.3"
55     ],
56     "gdpr": [
57         "IV_35.7.d"
58     ]

```

```

59     },
60     "location": "EventChannel",
61     "decoder": {
62         "name": "windows_eventchannel"
63     },
64     "id": "1644944065.1549830",
65     "timestamp": "2022-02-15T17:54:25.635+0100"
66 },
67 "fields": {
68     "timestamp": [
69         "2022-02-15T16:54:25.635Z"
70     ]
71 },
72 "highlight": {
73     "agent.id": [
74         "@kibana-highlighted-field@003@/kibana-highlighted-field@"
75     ],
76     "manager.name": [
77         "@kibana-highlighted-field@Vodafone@/kibana-highlighted-field@"
78     ]
79 },
80 "sort": [
81     1644944065635
82 ]
83 }

```

```

1  {
2    "_index": "wazuh-alerts-4.x-2022.02.15",
3    "_type": "_doc",
4    "_id": "rJx0_n4BMzeLMS_HhzTn",
5    "_version": 1,
6    "_score": null,
7    "_source": {
8      "input": {
9        "type": "log"
10     },
11     "agent": {
12       "ip": "192.168.128.89",
13       "name": "B70017351361129",
14       "id": "003"
15     },
16     "manager": {
17       "name": "Vodafone"
18     },
19     "data": {
20       "win": {
21         "eventdata": {
22           "data": "Event type:      Malicious object detected
Application:      Google Chrome Application\\Name:
chrome.exe Application\\Path:      C:\\Program Files
\\Google\\Chrome\\Application\\ Application\\
Process ID:      12640 User:      B70017351361129\\alum
-01 (Active user) Component:      Web Threat Protection
Result\\Description:      Detected Result\\Type:
Virus Result\\Name:      EICAR-Test-File Result\\
Threat level:      High Result\\Precision:      Exactly
Object:      https://secure.eicar.org/eicar_com.zip//eicar
.com Object\\Type:      File Object\\Path:      https

```

```

        ://secure.eicar.org/eicar_com.zip//eicar.com Object\\\\"
        Name:      eicar.com Reason:      Expert analysis Database
        release date:      24/9/2021 13:20:00 Hash:      275
        a021bbfb6489e54d471899f7db9d1663fc695ec2fe2a2c4538aabf651fd0f
        "
23      },
24      "system": {
25          "eventID": "302",
26          "keywords": "0x8000000000000000",
27          "level": "2",
28          "channel": "Kaspersky Endpoint Security",
29          "opcode": "0",
30          "message": "\"Event type:      Malicious object detected\
nApplication:      Google Chrome\nApplication\\Name:
chrome.exe\nApplication\\Path:      C:\\Program Files\\
Google\\Chrome\\Application\\Application\\Process ID:
12640\nUser:      B70017351361129\\alum-01 (Active
user)\nComponent:      Web Threat Protection\nResult\\
Description:      Detected\nResult\\Type:      Virus\
nResult\\Name:      EICAR-Test-File\nResult\\Threat level:
High\nResult\\Precision:      Exactly\nObject:
https://secure.eicar.org/eicar_com.zip//eicar.com\nObject
\\Type:      File\nObject\\Path:      https://secure.eicar.
org/eicar_com.zip//eicar.com\nObject\\Name:      eicar.com
\nReason:      Expert analysis\nDatabase release date:
24/9/2021 13:20:00\nHash:      275
a021bbfb6489e54d471899f7db9d1663fc695ec2fe2a2c4538aabf651fd0f
\n\"",
31          "version": "0",
32          "systemTime": "2022-02-15T16:54:31.8356917Z",
33          "eventRecordID": "544",
34          "threadID": "0",
35          "computer": "B70017351361129",
36          "task": "0",
37          "processID": "0",
38          "severityValue": "ERROR",
39          "providerName": "avp"
40      }
41  }
42  },
43  "rule": {
44      "firedtimes": 3,
45      "mail": false,
46      "level": 5,
47      "description": "Windows error event",
48      "groups": [
49          "windows",
50          "system_error"
51      ],
52      "id": "60011",
53      "gpg13": [
54          "4.3"
55      ],
56      "gdpr": [
57          "IV_35.7.d"
58      ]
59  },
60  "location": "EventChannel",

```



```

61     "decoder": {
62         "name": "windows_eventchannel"
63     },
64     "id": "1644944063.1545645",
65     "timestamp": "2022-02-15T17:54:23.865+0100"
66 },
67 "fields": {
68     "timestamp": [
69         "2022-02-15T16:54:23.865Z"
70     ]
71 },
72 "highlight": {
73     "agent.id": [
74         "@kibana-highlighted-field@003@/kibana-highlighted-field@"
75     ],
76     "manager.name": [
77         "@kibana-highlighted-field@Vodafone@/kibana-highlighted-field@"
78     ]
79 },
80 "sort": [
81     1644944063865
82 ]
83 }

```

```

1  {
2    "_index": "wazuh-alerts-4.x-2022.02.15",
3    "_type": "_doc",
4    "_id": "q5x0_n4BMzeLMS_HfDRN",
5    "_version": 1,
6    "_score": null,
7    "_source": {
8      "input": {
9        "type": "log"
10     },
11     "agent": {
12       "ip": "192.168.128.89",
13       "name": "B70017351361129",
14       "id": "003"
15     },
16     "manager": {
17       "name": "Vodafone"
18     },
19     "data": {
20       "win": {
21         "eventdata": {
22           "data": "Event type:      Malicious object detected
Application:      Google Chrome Application\\Name:
chrome.exe Application\\Path:      C:\\Program Files
\\Google\\Chrome\\Application\\ Application\\
Process ID:      12640 User:      B70017351361129\\alum
-01 (Active user) Component:      Web Threat Protection
Result\\Description:      Detected Result\\Type:
Virus Result\\Name:      EICAR-Test-File Result\\
Threat level:      High Result\\Precision:      Exactly
Object:      https://secure.eicar.org/eicar.com.txt Object
\\Type:      File Object\\Path:      https://secure.
eicar.org/eicar.com.txt Object\\Name:      eicar.com.txt
Reason:      Expert analysis Database release date:

```

```

24/9/2021 13:20:00 Hash:      275
a021bbfb6489e54d471899f7db9d1663fc695ec2fe2a2c4538aabf651fd0f
"
23     },
24     "system": {
25         "eventID": "302",
26         "keywords": "0x8000000000000000",
27         "level": "2",
28         "channel": "Kaspersky Endpoint Security",
29         "opcode": "0",
30         "message": "\"Event type:      Malicious object detected\\
nApplication:      Google Chrome\\nApplication\\Name:
chrome.exe\\nApplication\\Path:      C:\\Program Files\\
Google\\Chrome\\Application\\nApplication\\Process ID:
12640\\nUser:      B70017351361129\\alum-01 (Active
user)\\nComponent:  Web Threat Protection\\nResult\\
Description:      Detected\\nResult\\Type:      Virus\\
nResult\\Name:      EICAR-Test-File\\nResult\\Threat level:
High\\nResult\\Precision:      Exactly\\nObject:
https://secure.eicar.org/eicar.com.txt\\nObject\\Type:
File\\nObject\\Path:      https://secure.eicar.org/
eicar.com.txt\\nObject\\Name:      eicar.com.txt\\nReason:
Expert analysis\\nDatabase release date:      24/9/2021
13:20:00\\nHash:      275
a021bbfb6489e54d471899f7db9d1663fc695ec2fe2a2c4538aabf651fd0f
\\n\\\"",
31         "version": "0",
32         "systemTime": "2022-02-15T16:54:29.0471847Z",
33         "eventRecordID": "543",
34         "threadID": "0",
35         "computer": "B70017351361129",
36         "task": "0",
37         "processID": "0",
38         "severityValue": "ERROR",
39         "providerName": "avp"
40     }
41 }
42 },
43 "rule": {
44     "firedtimes": 2,
45     "mail": false,
46     "level": 5,
47     "description": "Windows error event",
48     "groups": [
49         "windows",
50         "system_error"
51     ],
52     "id": "60011",
53     "gpg13": [
54         "4.3"
55     ],
56     "gdpr": [
57         "IV_35.7.d"
58     ]
59 },
60 "location": "EventChannel",
61 "decoder": {
62     "name": "windows_eventchannel"

```

```

63     },
64     "id": "1644944061.1541532",
65     "timestamp": "2022-02-15T17:54:21.162+0100"
66   },
67   "fields": {
68     "timestamp": [
69       "2022-02-15T16:54:21.162Z"
70     ]
71   },
72   "highlight": {
73     "agent.id": [
74       "@kibana-highlighted-field@003@/kibana-highlighted-field@"
75     ],
76     "manager.name": [
77       "@kibana-highlighted-field@Vodafone@/kibana-highlighted-field@"
78     ]
79   },
80   "sort": [
81     1644944061162
82   ]
83 }

```

```

1 {
2   "_index": "wazuh-alerts-4.x-2022.02.15",
3   "_type": "_doc",
4   "_id": "ppxM_n4BMzeLMS_HuzQY",
5   "_version": 1,
6   "_score": null,
7   "_source": {
8     "input": {
9       "type": "log"
10    },
11    "agent": {
12      "ip": "192.168.128.89",
13      "name": "B70017351361129",
14      "id": "003"
15    },
16    "manager": {
17      "name": "Vodafone"
18    },
19    "data": {
20      "win": {
21        "eventdata": {
22          "data": "Event type:      Malicious object detected
Application:      Google Chrome Application\\Name:
chrome.exe Application\\Path:      C:\\Program Files
\\Google\\Chrome\\Application\\ Application\\
Process ID:      12640 User:      B70017351361129\\alum
-01 (Active user) Component:      Web Threat Protection
Result\\Description:      Detected Result\\Type:
Virus Result\\Name:      EICAR-Test-File Result\\
Threat level:      High Result\\Precision:      Exactly
Object:      https://secure.eicar.org/eicar.com Object\\
Type:      File Object\\Path:      https://secure.eicar.
org/eicar.com Object\\Name:      eicar.com Reason:
Expert analysis Database release date:      24/9/2021
13:20:00 Hash:      275
a021bbfb6489e54d471899f7db9d1663fc695ec2fe2a2c4538aabf651fd0f

```

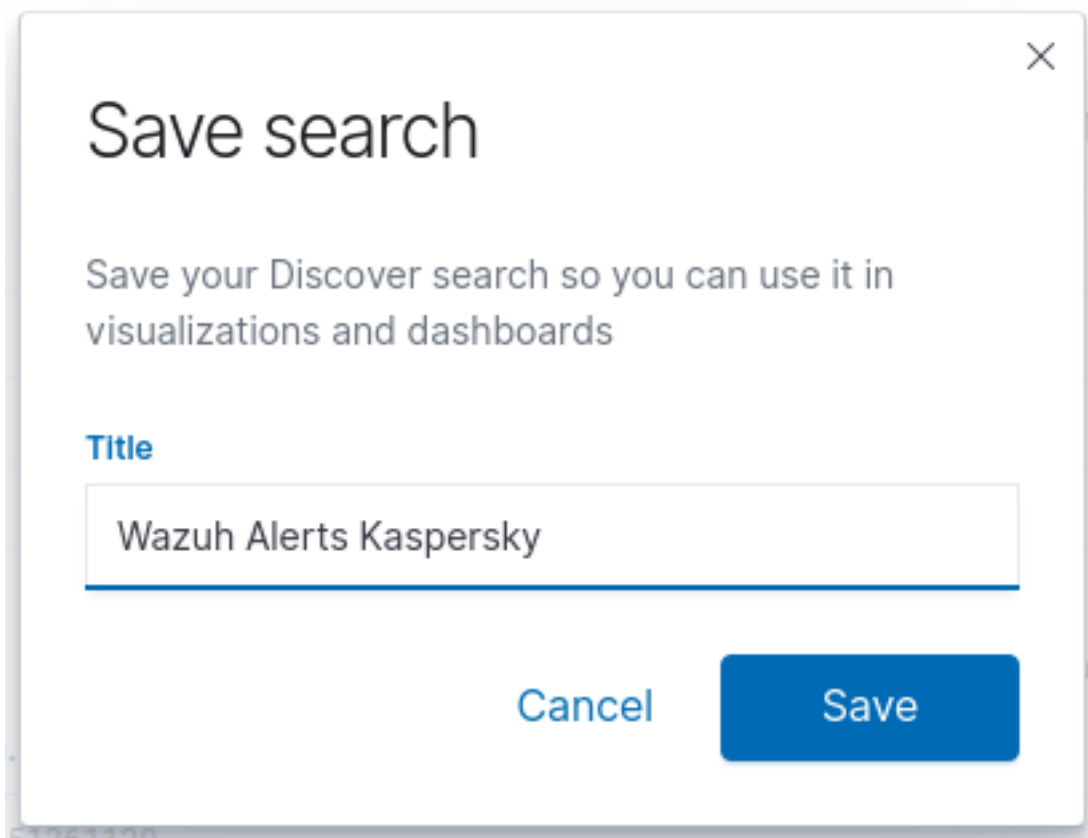
```

23     },
24     "system": {
25         "eventID": "302",
26         "keywords": "0x8000000000000000",
27         "level": "2",
28         "channel": "Kaspersky Endpoint Security",
29         "opcode": "0",
30         "message": "\"Event type:      Malicious object detected\\
        nApplication:      Google Chrome\\nApplication\\Name:
        chrome.exe\\nApplication\\Path:      C:\\Program Files\\
        Google\\Chrome\\Application\\nApplication\\Process ID:
        12640\\nUser:      B70017351361129\\alum-01 (Active
        user)\\nComponent:      Web Threat Protection\\nResult\\
        Description:      Detected\\nResult\\Type:      Virus\\
        nResult\\Name:      EICAR-Test-File\\nResult\\Threat level:
        High\\nResult\\Precision:      Exactly\\nObject:
        https://secure.eicar.org/eicar.com\\nObject\\Type:
        File\\nObject\\Path:      https://secure.eicar.org/eicar.
        com\\nObject\\Name:      eicar.com\\nReason:      Expert
        analysis\\nDatabase release date:      24/9/2021 13:20:00\\
        nHash:      275
        a021bbfb6489e54d471899f7db9d1663fc695ec2fe2a2c4538aabf651fd0f
        \\n\"",
31         "version": "0",
32         "systemTime": "2022-02-15T16:52:34.8645210Z",
33         "eventRecordID": "542",
34         "threadID": "0",
35         "computer": "B70017351361129",
36         "task": "0",
37         "processID": "0",
38         "severityValue": "ERROR",
39         "providerName": "avp"
40     }
41 }
42 },
43 "rule": {
44     "firedtimes": 1,
45     "mail": false,
46     "level": 5,
47     "description": "Windows error event",
48     "groups": [
49         "windows",
50         "system_error"
51     ],
52     "id": "60011",
53     "gpg13": [
54         "4.3"
55     ],
56     "gdpr": [
57         "IV_35.7.d"
58     ]
59 },
60 "location": "EventChannel",
61 "decoder": {
62     "name": "windows_eventchannel"
63 },
64 "id": "1644943946.1537467",

```

```
65     "timestamp": "2022-02-15T17:52:26.895+0100"  
66   },  
67   "fields": {  
68     "timestamp": [  
69       "2022-02-15T16:52:26.895Z"  
70     ]  
71   },  
72   "highlight": {  
73     "agent.id": [  
74       "@kibana-highlighted-field@003@/kibana-highlighted-field@"  
75     ],  
76     "manager.name": [  
77       "@kibana-highlighted-field@Vodafone@/kibana-highlighted-field@"  
78     ]  
79   },  
80   "sort": [  
81     1644943946895  
82   ]  
83 }
```

We can save this search configuration to find it quickly, since it is information that we may want to monitor often.



Save search

Save your Discover search so you can use it in visualizations and dashboards

Title

Wazuh Alerts Kaspersky

Cancel Save

Figure 5: “Save search”

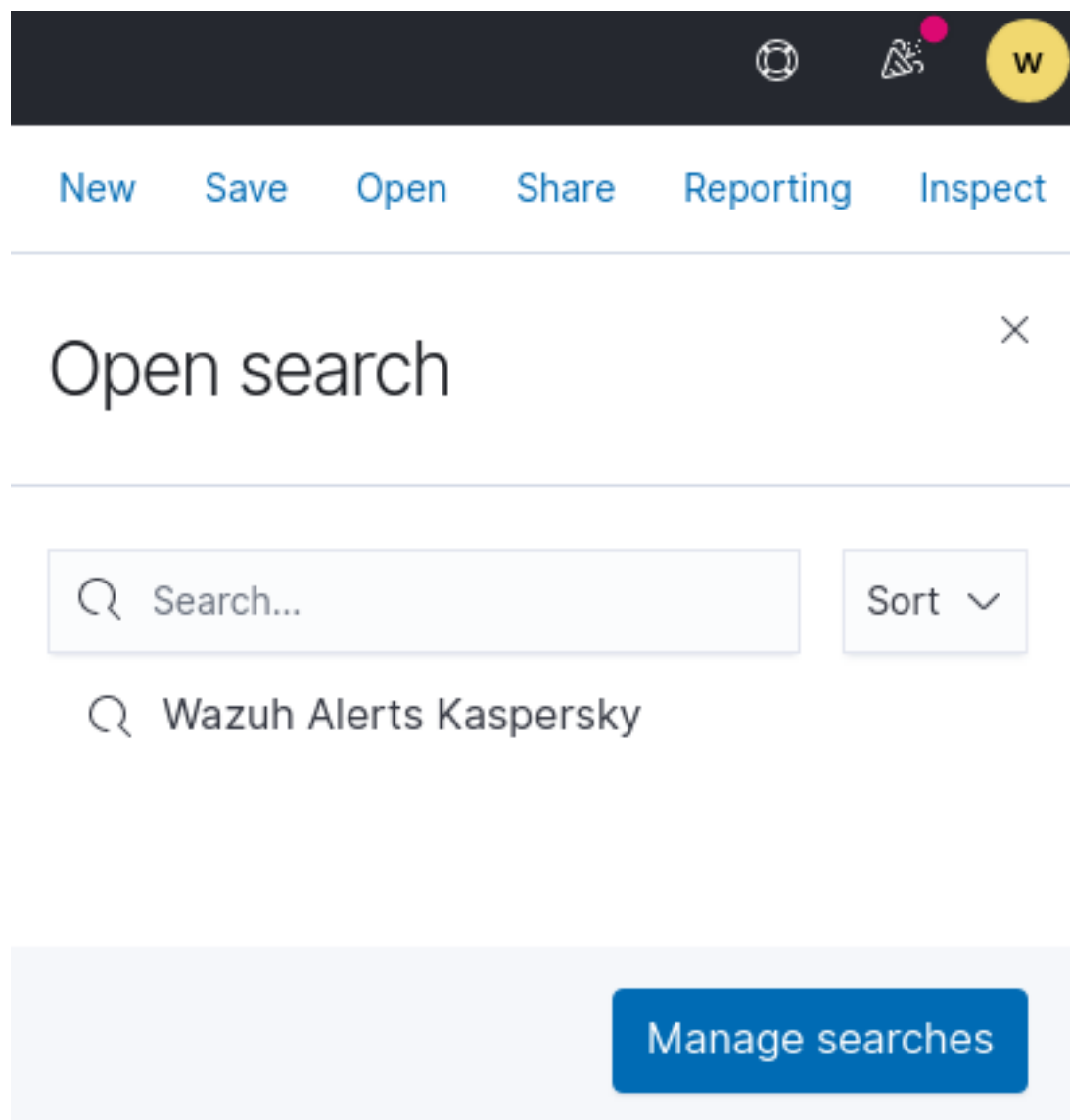


Figure 6: “Open search”

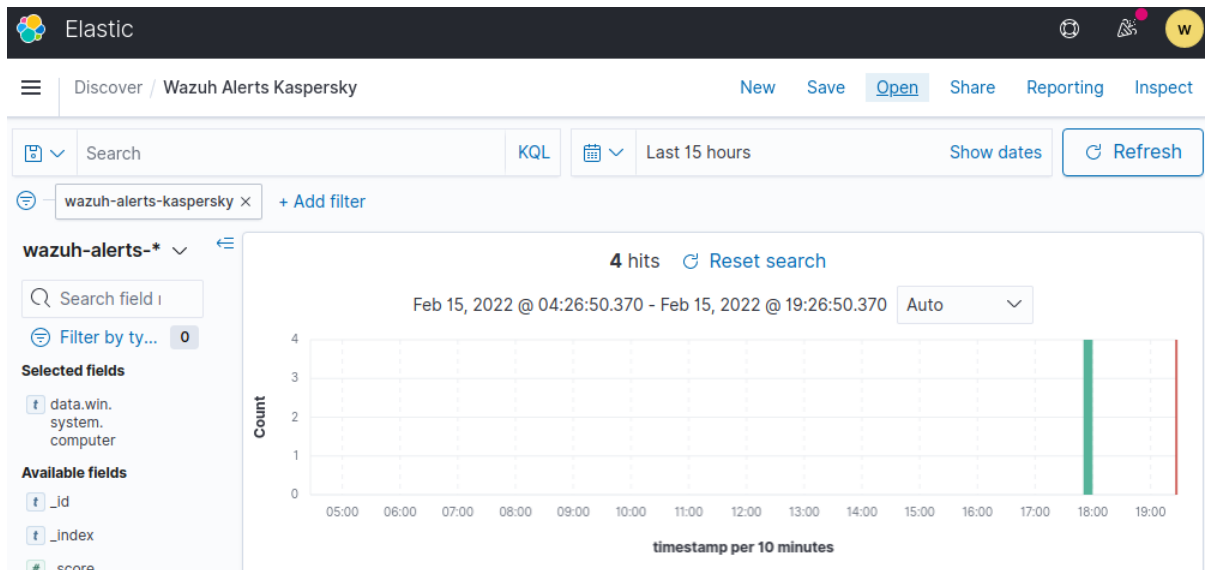


Figure 7: “Custom ‘Wazuh Alerts Kaspersky’ search”

We can also create custom dashboards to monitor what we want. A dashboard is organized with panels in a row and column structure. Thus, we can have different information with different time ranges in custom graphs.

First of all, we will create a visualization bar chart with the number of kaspersky alerts per agent.

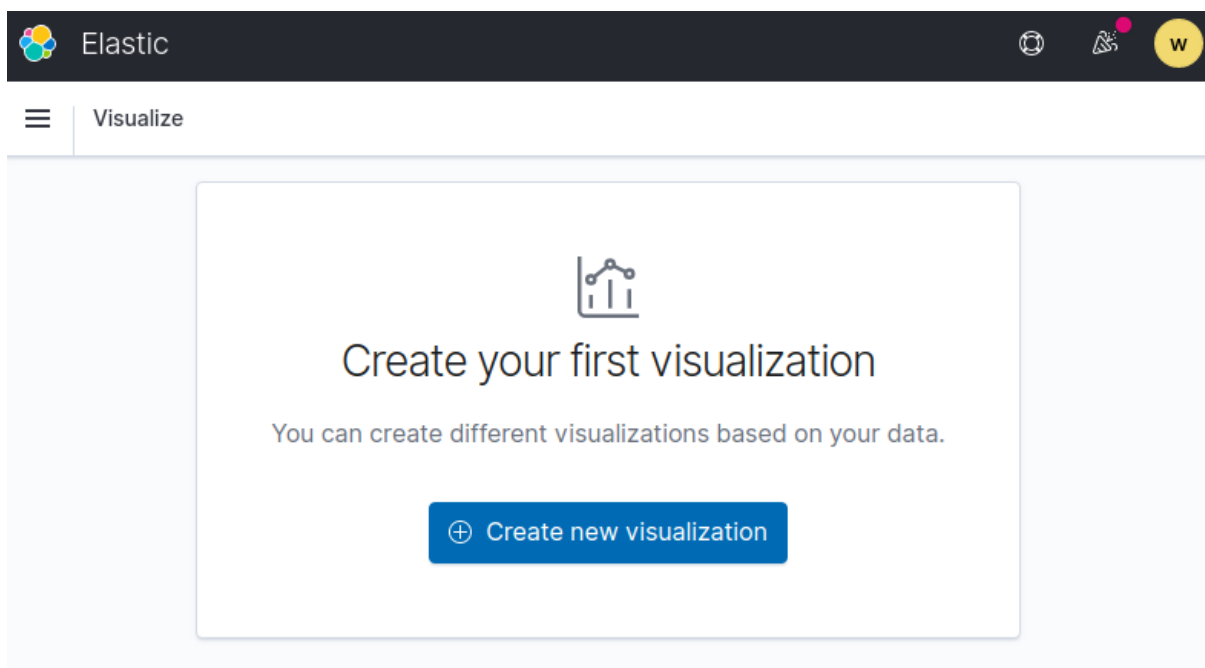


Figure 8: “Create visualitzation”

New Vertical Bar / Choose a source

Search... Sort ▾ Types 2 ▾

Wazuh Alerts Kaspersky

- wazuh-alerts-*
- wazuh-monitoring-*
- wazuh-statistics-*

Figure 9: “Add graph”

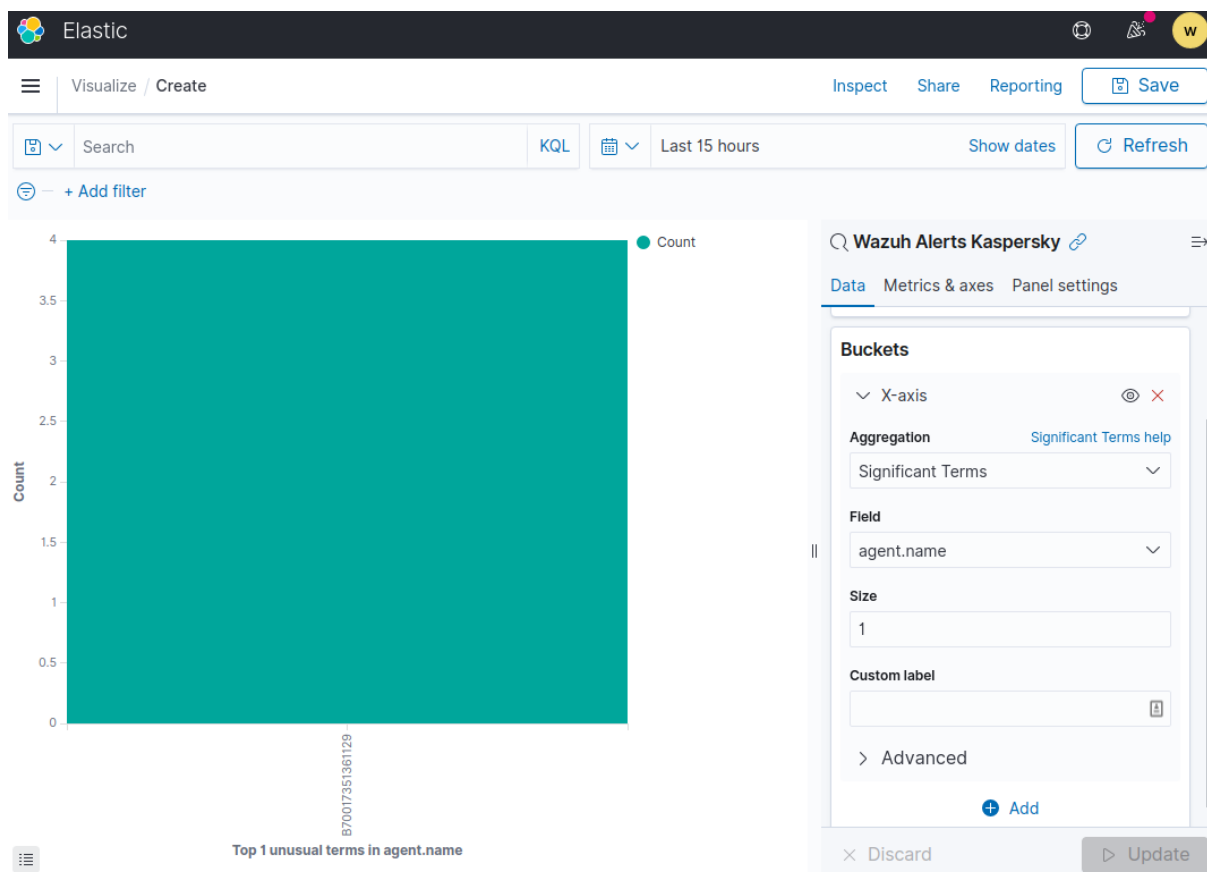


Figure 10: “Create graph”

×

Save visualization

Title

Description

Cancel Save

Figure 11: “Save visualization”

With the first element created, we proceed to create the dashboard.

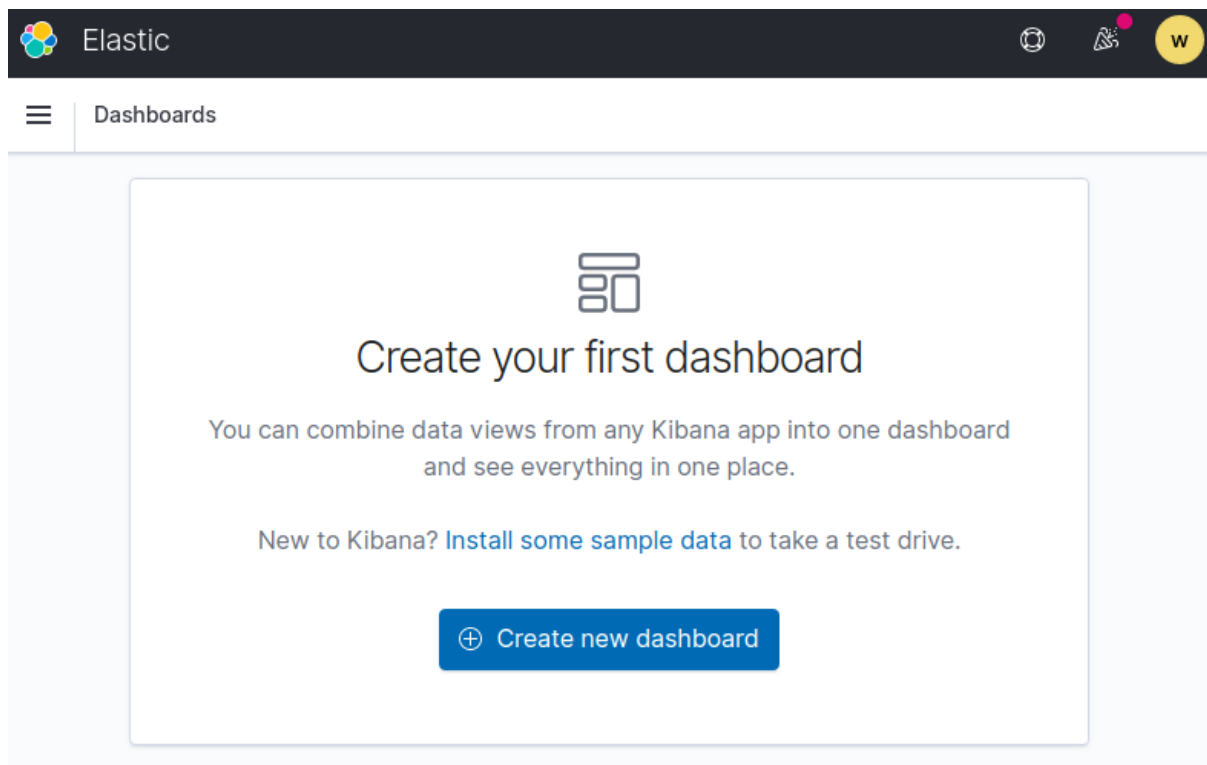


Figure 12: “Create dashboard”

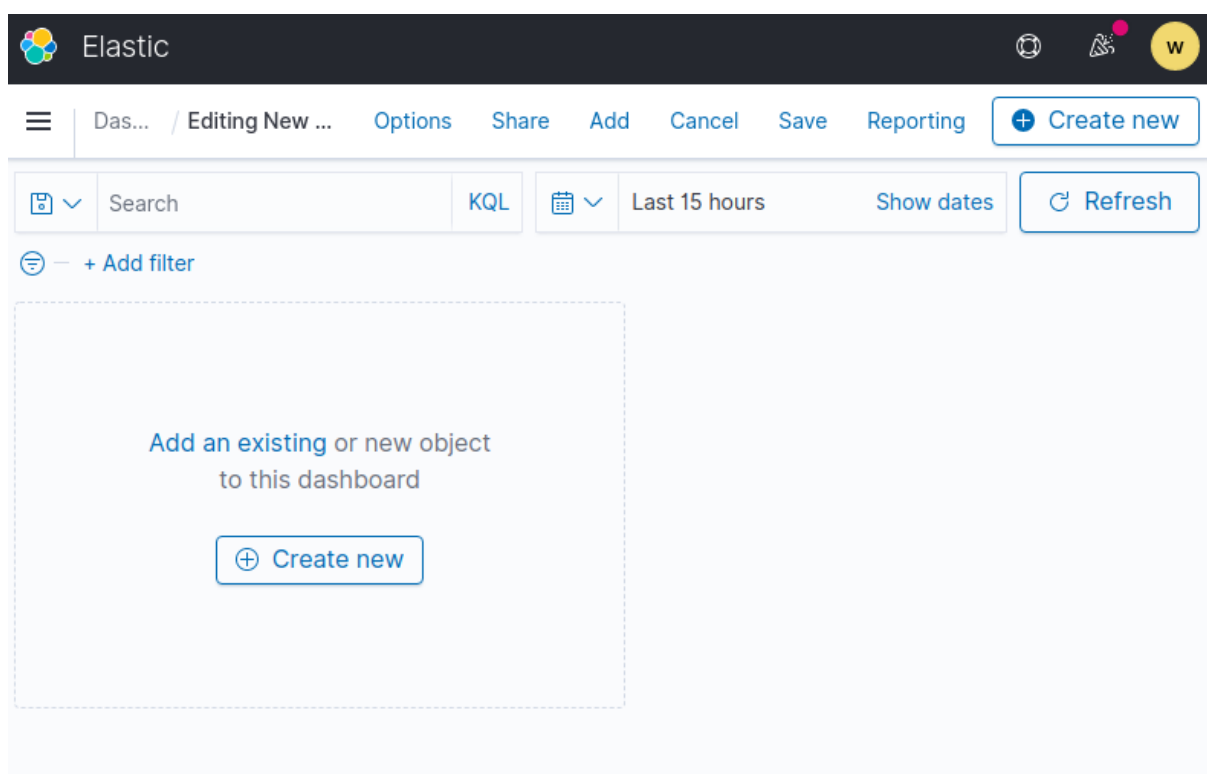


Figure 13: “Editing dashboard”

We have created other panels to create a useful dashboard. Now we add each graph in a position

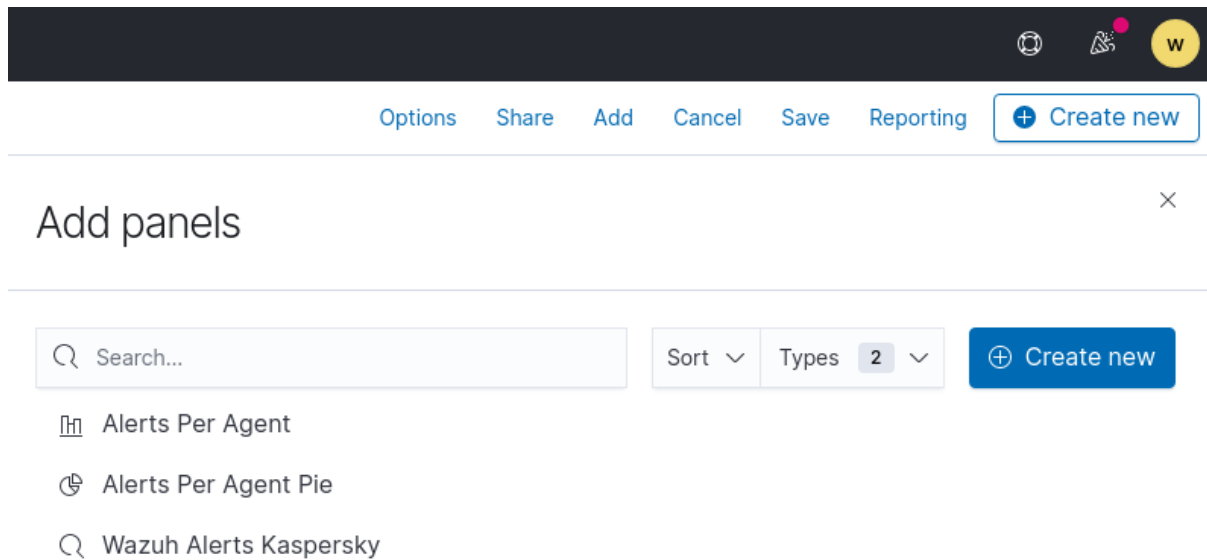


Figure 14: “Add panels to dashboard”

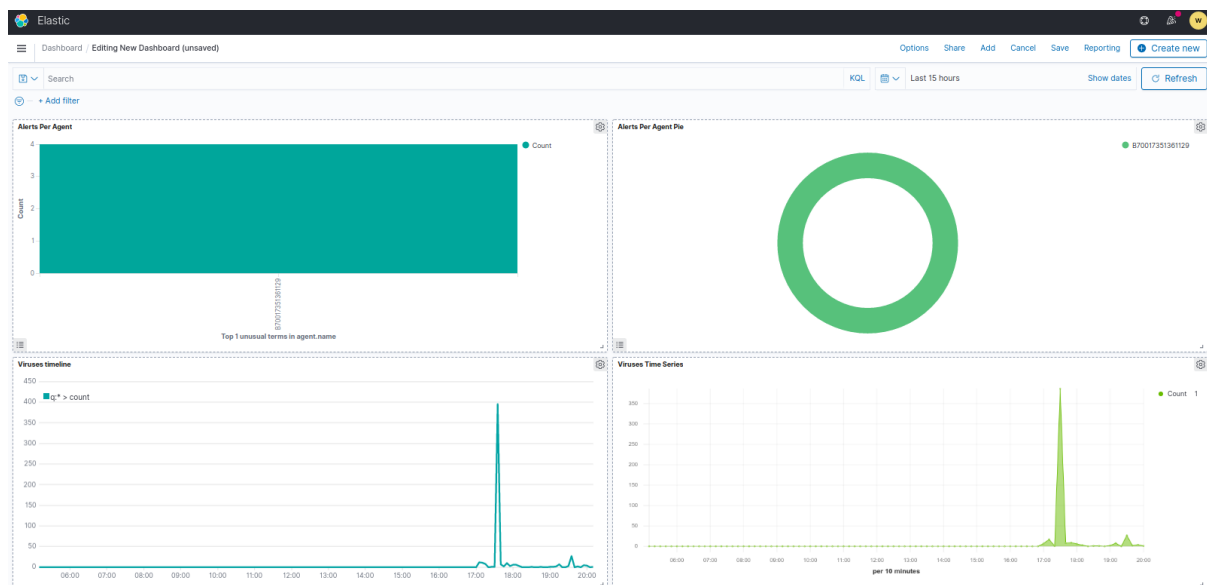


Figure 15: “Editing our dashboard”

×

Save dashboard

Title

Description

☐ × Store time with dashboard

This changes the time filter to the currently selected time each time this dashboard is loaded.

CancelSave

Figure 16: “Save dashboard”

Now we can monitor the chosen information simply by opening our dashboard.

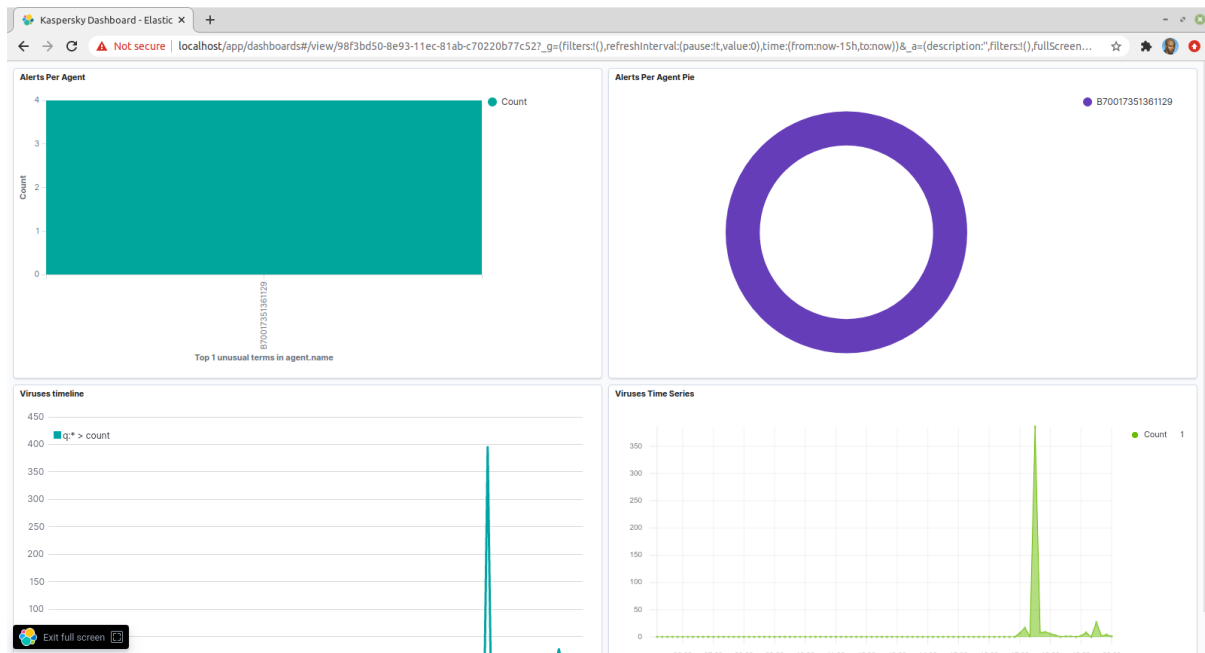


Figure 17: “Kaspersky Dashboard”