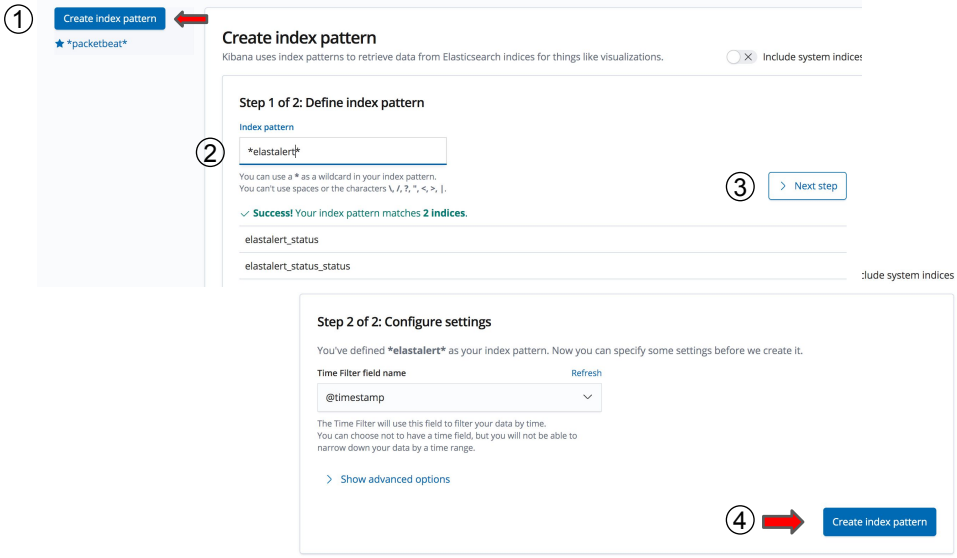
Create ElastAlert index pattern

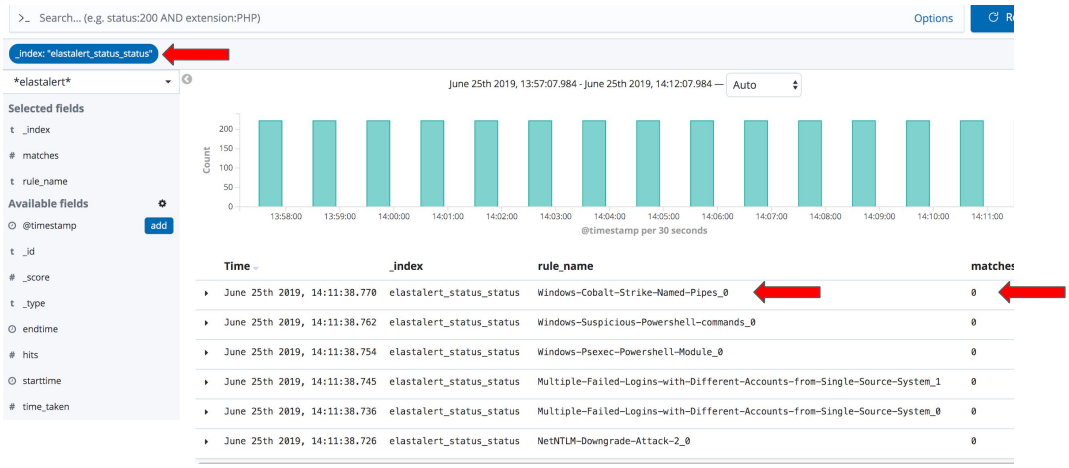


We are going to create an ElastAlert rule to trigger on long command lines from Sysmon's process create event. To generate alerts we are going to import logs from Cyb3rWard0g's Mordor project (https://github.com/Cyb3rWard0g/mordor).

First we need to create an index pattern to be able to view the ElastAlert logs in Kibana. Open Kibana either from the shortcut on the CentOS machine or by visiting http://<CentOS IP>:5601/ from your host machine.

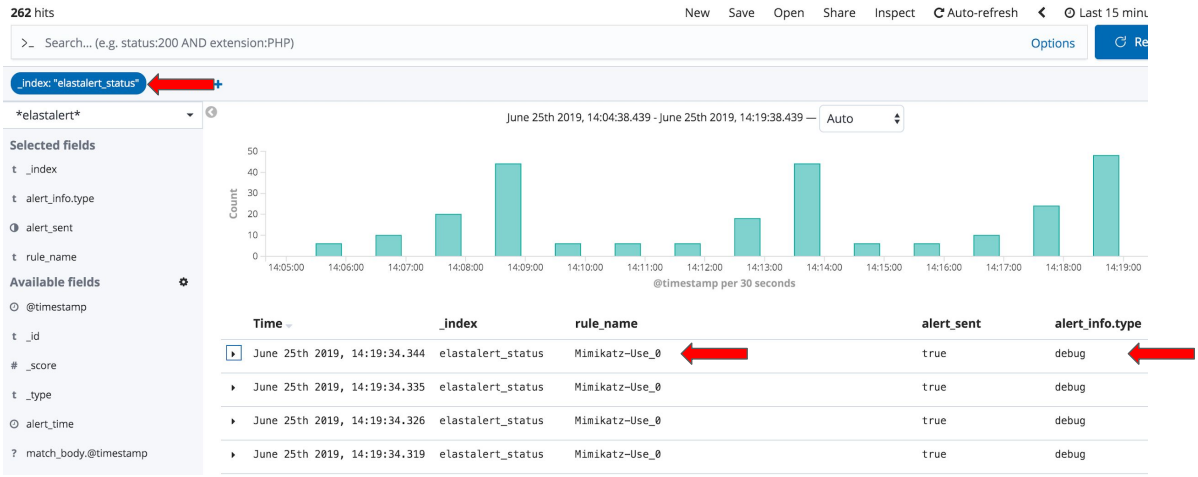
1) Click on Create index pattern
2) Type *elastalert* then click Next Step
3) Select @timestamp from the dropdown
4) Finally click, Create index pattern

ElastAlert Status index



Once the index pattern is created we can use to the discover tab to view the Elastalert logs. The ElastAlert Status writeback index contains information on each rule that runs and the number of matches and hits that were returned. In the screenshot above we see the rule_name of the Sigma rules and the number of matches that were returned when the rule was run.

ElastAlert index



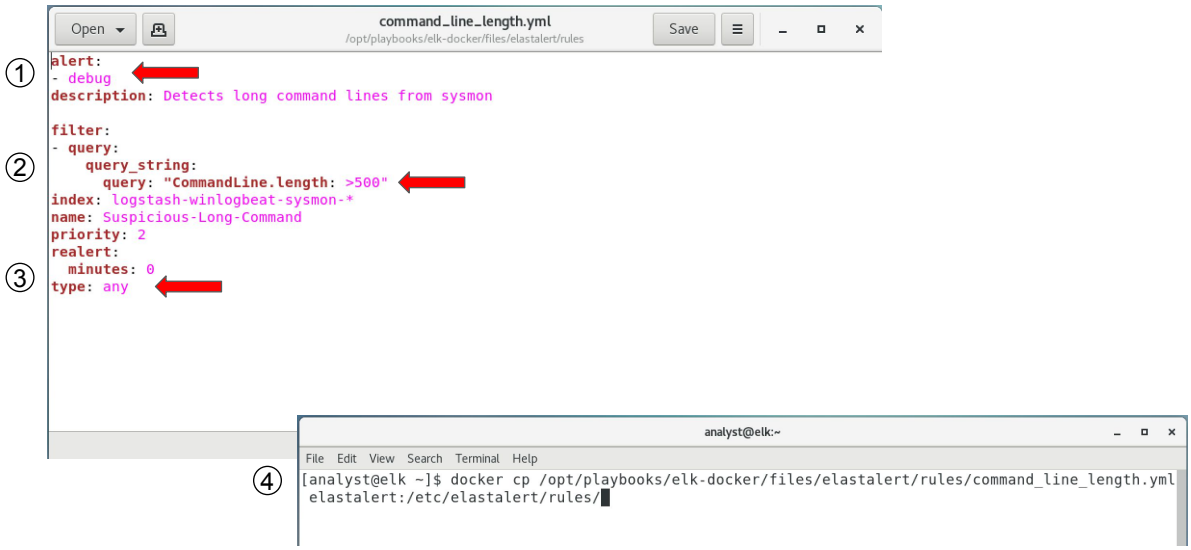
The Elastalert writeback index is a log of information about every alert triggered. It contains the full log(s) that tripped the alert and details about the alert that was generated.

ElastAlert rules directory

```
Applications   Places   Terminal
                                                    analyst@elk:~
File  Edit  View  Search  Terminal  Help
[analyst@elk ~]$
[analyst@elk ~]$ elastalert
$ cd rules
$ pwd
/etc/elastalert/rules
$ ls
helk_all_psexec_psh.yml                                  sigma_win_netsh_fw_add.yml
helk_all_susp_powershell_commands.yml                    sigma_win_netsh_port_fwd_3389.
helk_sysmon_cobalt_strike_msagent.yml                    sigma_win_netsh_port_fwd.yml
sigma_av_exploiting.yml                                  sigma_win_office_shell.yml
sigma_av_password_dumper.yml                             sigma_win_office_spawn_exe_fro
sigma_av_relevant_files.yml                              sigma_win_overpass_the_hash.ym
sigma_av_webshell.yml                                    sigma_win_pass_the_hash.yml
```

1) In the terminal, run the elastalert command alias to open a shell in the Elastalert container
2) Change directories into the rules folder
3) Run ls to view all the rules Elastalert is configured for. All of the rules were generated from Sigma (https://github.com/Neo23x0/sigma) and added to the Elastalert container for you.

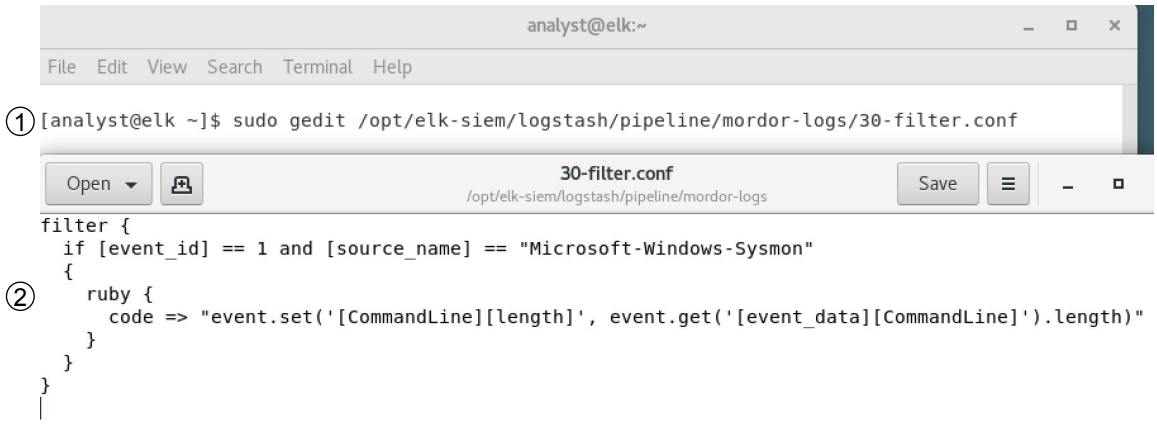
Copy ElastAlert command line rule into container



In the terminal, open the rule we are going to add by running:
sudo vi /opt/playbooks/elk-docker/files/elastalert/rules/command_line_length.yml or
sudo gedit /opt/playbooks/elk-docker/files/elastalert/rules/command_line_length.yml

1) For this lab we are going to set the alert field to debug, but ElastAlert has many alerting integrations including: e-mail, Jira, theHive, Opsgenie, and many more
2) The alert is using our command line length field we created in the earlier lab. In this case, we are looking for commands that are greater than 500 characters
3) We'll use any for the alert type which will generate an alert for every hit the query returns. There are several other rule types Elastalert supports as well: https://elastalert.readthedocs.io/en/latest/ruletypes.html#rule-types
4) Run the following command to copy the rule into the Elastalert container: docker cp /opt/playbooks/elk-docker/files/elastalert/rules/command_line_length.yml elastalert:/etc/elastalert/rules/

Add command line length to Mordor Logstash pipeline



1) Create a new filter conf file in the Mordor pipeline to add the command line length field:
sudo vi /opt/elk-siem/logstash/pipeline/mordor-logs/30-filter.conf or
sudo gedit /opt/elk-siem/logstash/pipeline/mordor-logs/30-filter.conf
2) Paste the following contents into the file to add the new field with Ruby, double check the text pasted correctly into the conf file:

```
filter {
  if [event_id] == 1 and [source_name] == "Microsoft-Windows-Sysmon"
  {
    ruby {
      code => "event.set('[CommandLine][length]',
event.get('[event_data][CommandLine]').length)"
    }
  }
}
```

Generate logs and enable the Mordor pipeline

analyst@elk:~

File Edit View Search Terminal Help

① [analyst@elk ~]$ sudo /opt/elk-siem/logstash/mordor-logs/current-date.sh

Open *pipelines.yml /opt/elk-siem/logstash/config Save

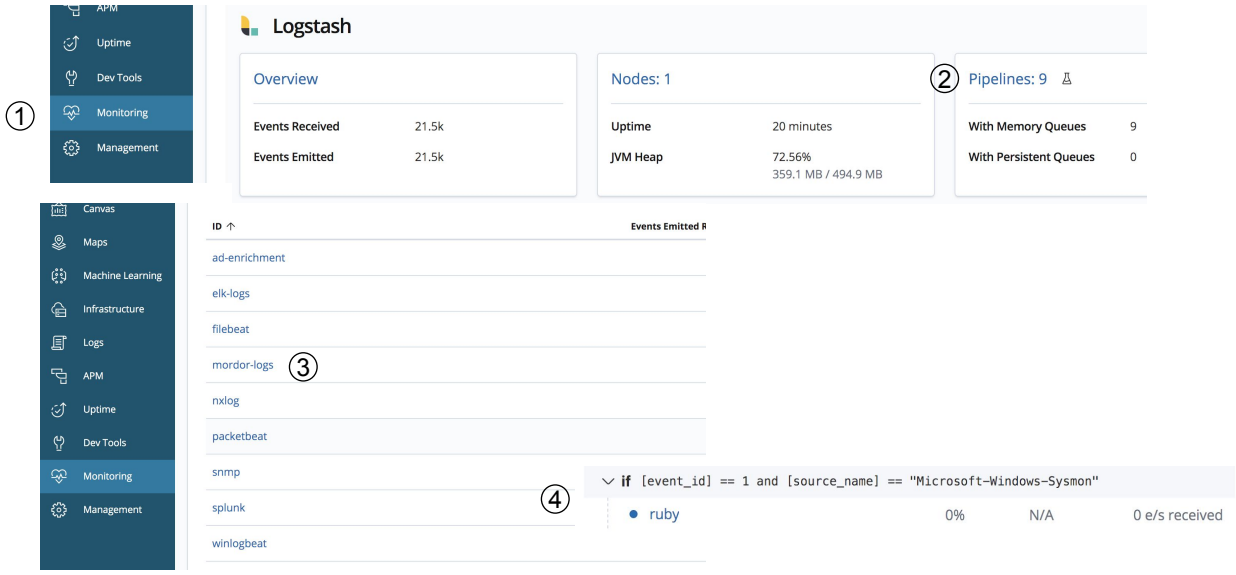
```
# This file is where you define your pipelines. You can define multiple.
# For more information on multiple pipelines, see the documentation:
#   https://www.elastic.co/guide/en/logstash/current/multiple-pipelines.ht

- pipeline.id: winlogbeat
  path.config: "/usr/share/logstash/pipeline/winlogbeat"
- pipeline.id: filebeat
  path.config: "/usr/share/logstash/pipeline/filebeat"
- pipeline.id: packetbeat
  path.config: "/usr/share/logstash/pipeline/packetbeat"
- pipeline.id: elk-logs
  path.config: "/usr/share/logstash/pipeline/elk-logs"
- pipeline.id: splunk
  path.config: "/usr/share/logstash/pipeline/splunk"
- pipeline.id: nxlog
  path.config: "/usr/share/logstash/pipeline/nxlog"
② - pipeline.id: mordor-logs
  path.config: "/usr/share/logstash/pipeline/mordor-logs"
- pipeline.id: ad-enrichment
  path.config: "/usr/share/logstash/pipeline/ad-enrichment"
- pipeline.id: snmp
  path.config: "/usr/share/logstash/pipeline/snmp"
```

We will be using a few datasets from Cyb3rWard0g's Mordor project (https://github.com/Cyb3rWard0g/mordor). The Mordor data can be used to simulate adversarial techniques using JSON documents.

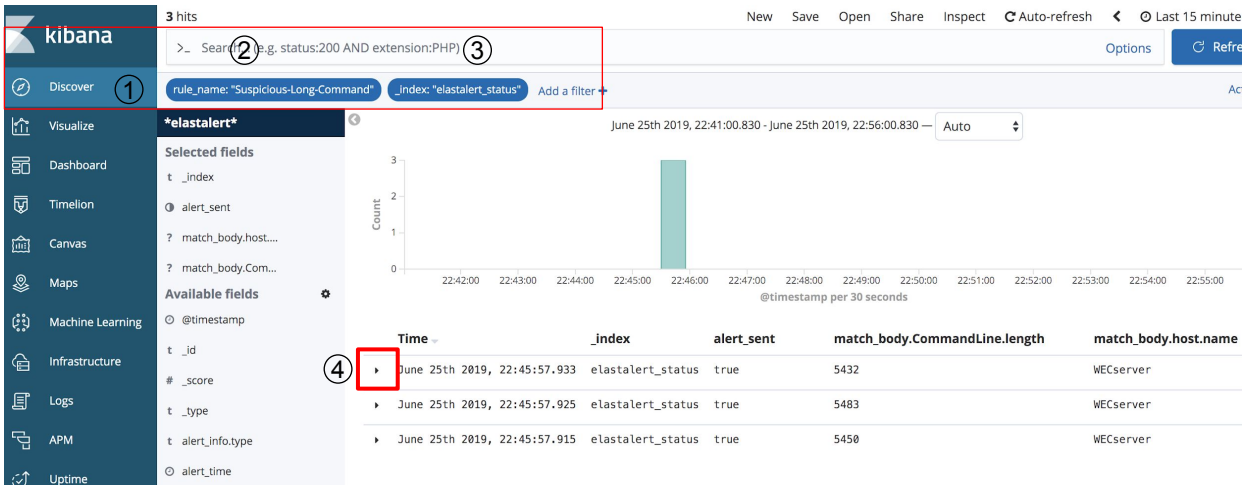
1) Run sudo /opt/elk-siem/logstash/mordor-logs/current-date.sh to import mordor logs. This current replaces the date in the Mordor data set with the current date.
2) Remove the comment (#) from the Mordor pipeline section in the pipelines.yml to enable it: sudo vi /opt/elk-siem/logstash/config/pipelines.yml or sudo gedit /opt/elk-siem/logstash/config/pipelines.yml

Verify the mordor-logs pipeline is running



1) Click on Monitoring in Kibana
2) Under logstash click Pipelines,
3) Then click on mordor logs
4) Verify the Ruby filter we added shows up in the mordor logs pipeline

View the Elastalert index for alerts



1) Click on Discover in Kibana
2) Add a filter for rule_name matching Suspicious-Long-Command
3) Add another filter for _index matching elastalert_status, which contains all the tripped Elastalert rules
4) Click the arrow next to the event to view the full alert details