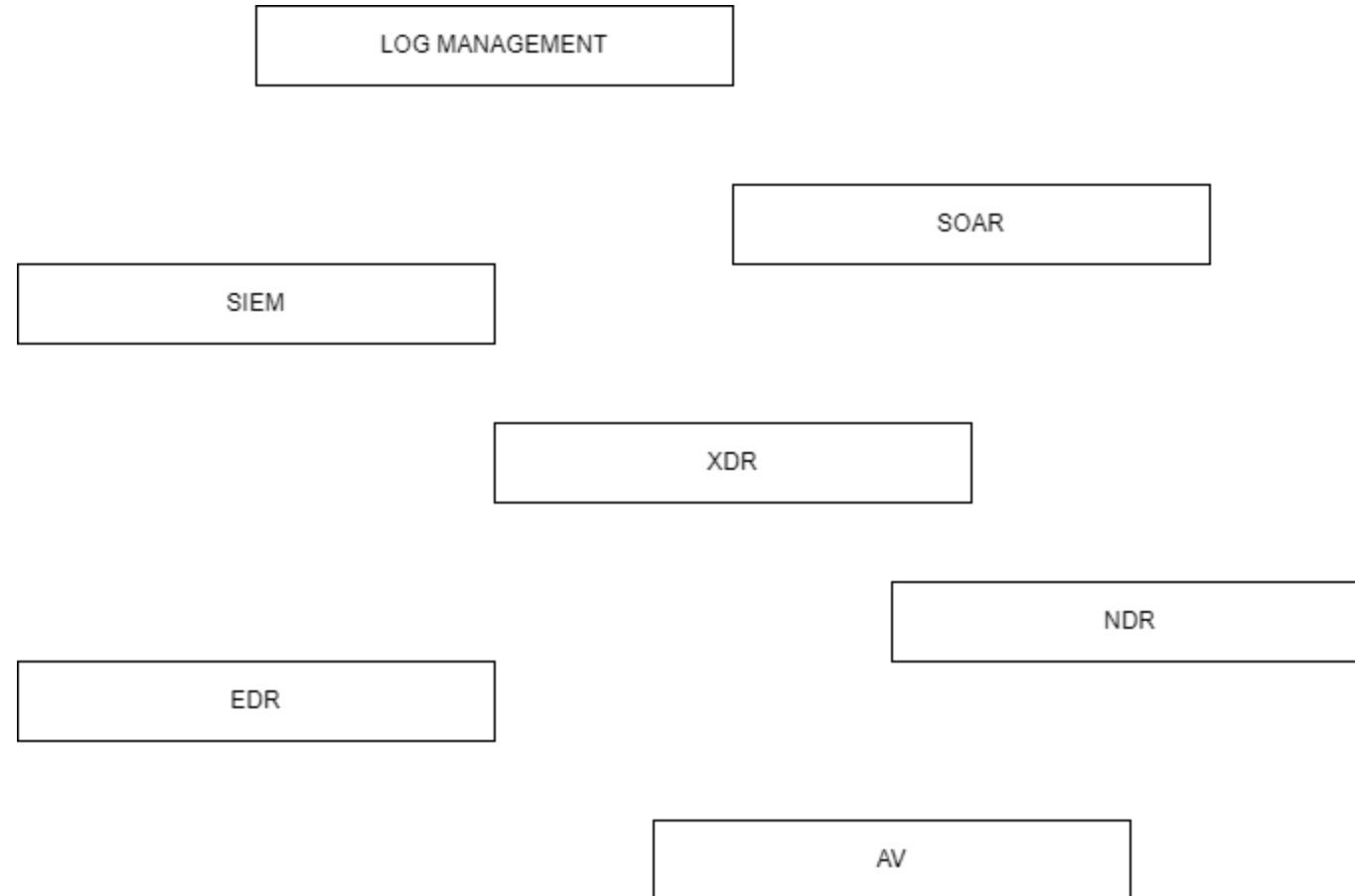


Elasticsearch jako řešení pro bezpečnostní dohled

Jindřich Němec







Shay Banon

Founder & CTO at Elastic

San Francisco Bay Area · [Contact info](#)



 **Connect**

 **Message**

More

Activity

846 followers

Shay hasn't posted lately

Shay's recent posts and comments will be displayed here.

[Show all activity →](#)

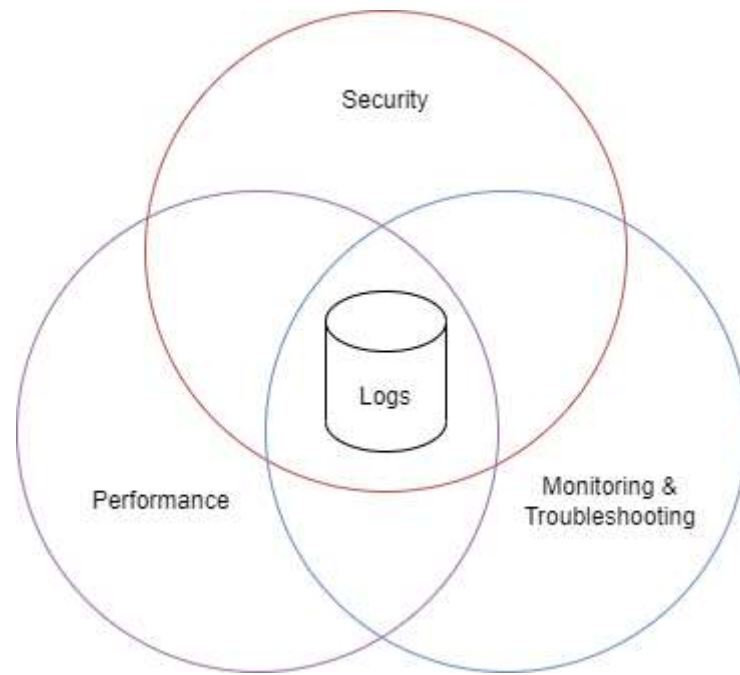
Experience

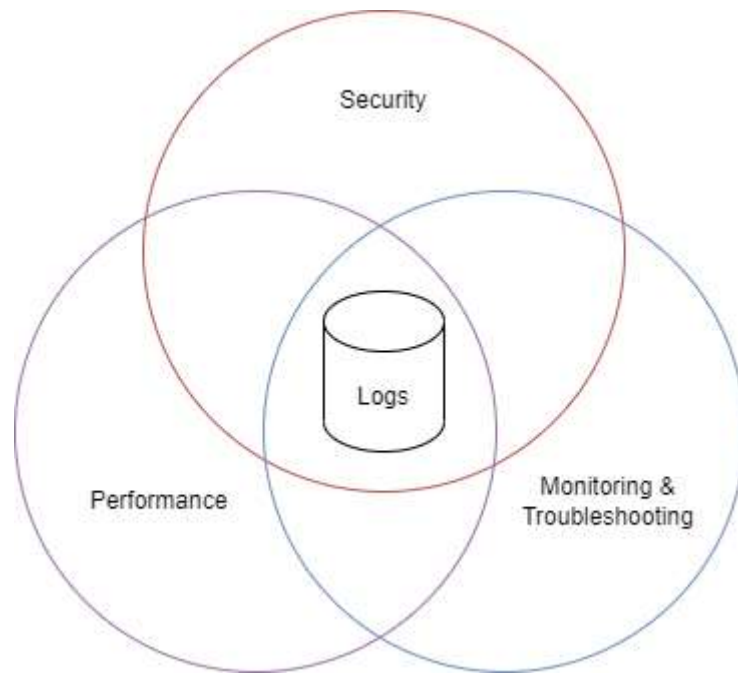


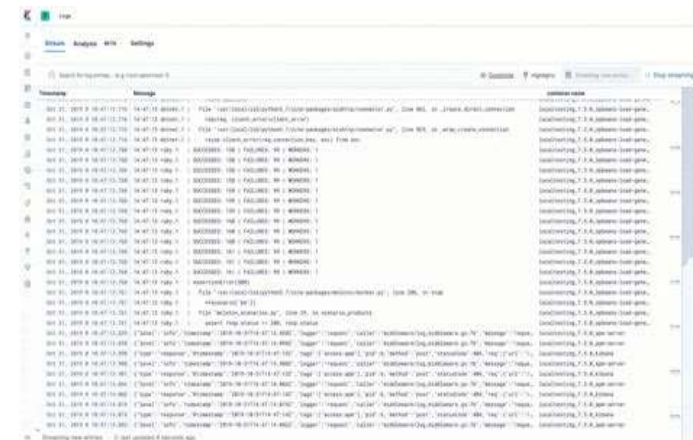
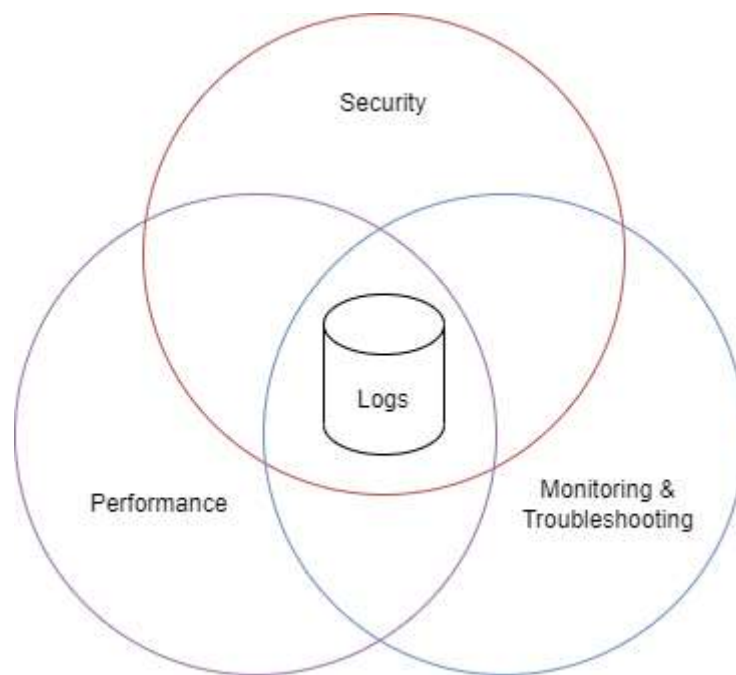
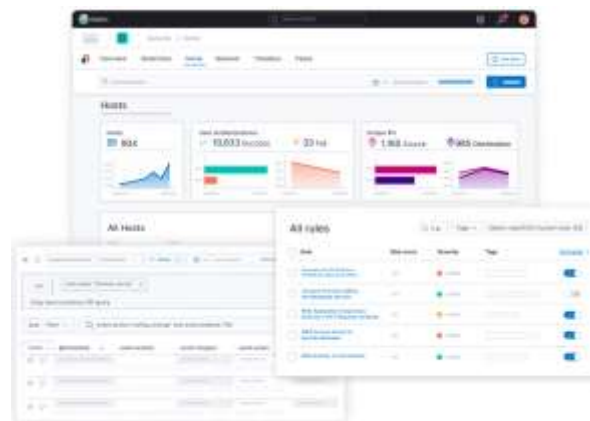
Chief Technology Officer

Elastic

May 2012 - Present · 11 yrs

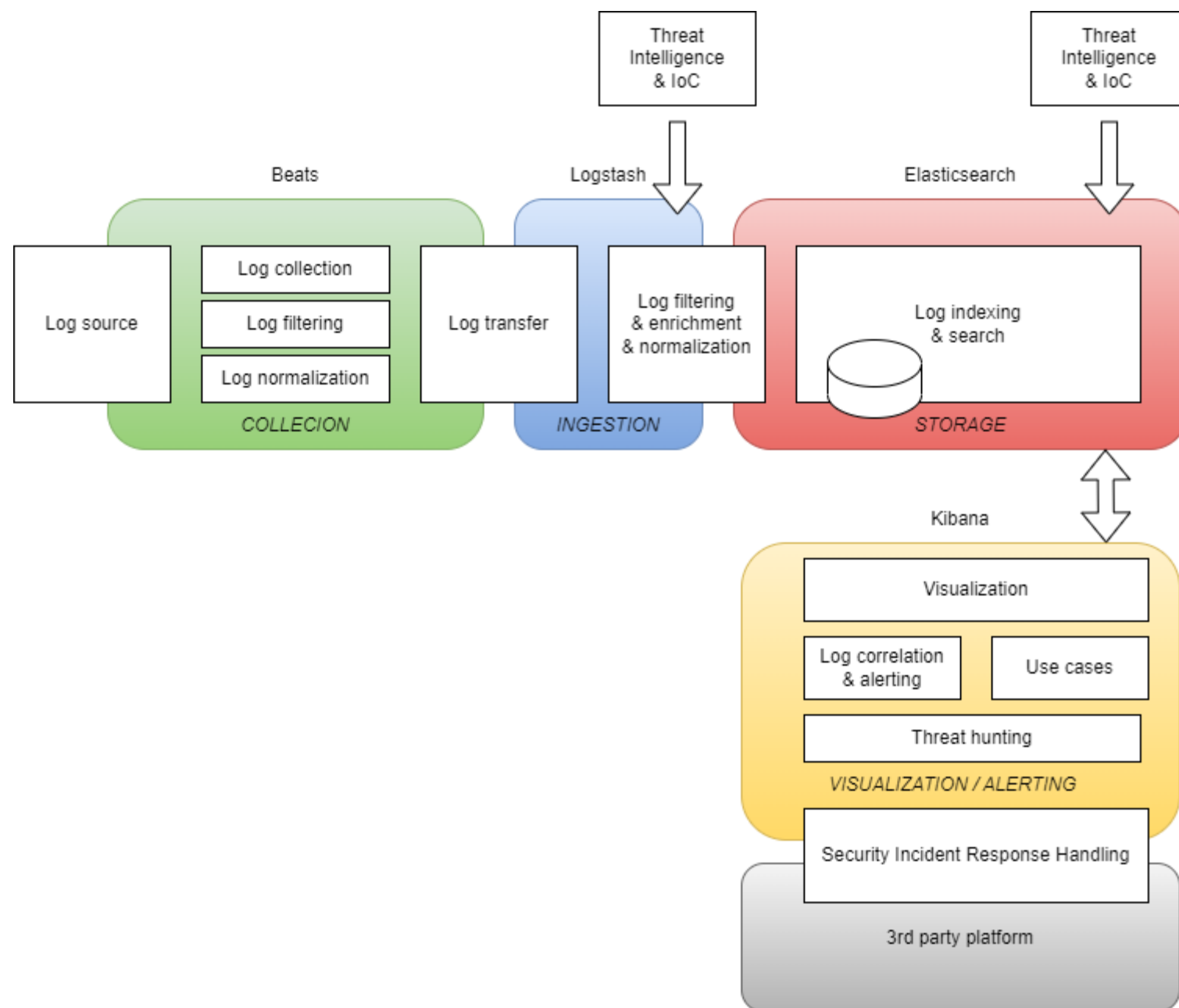


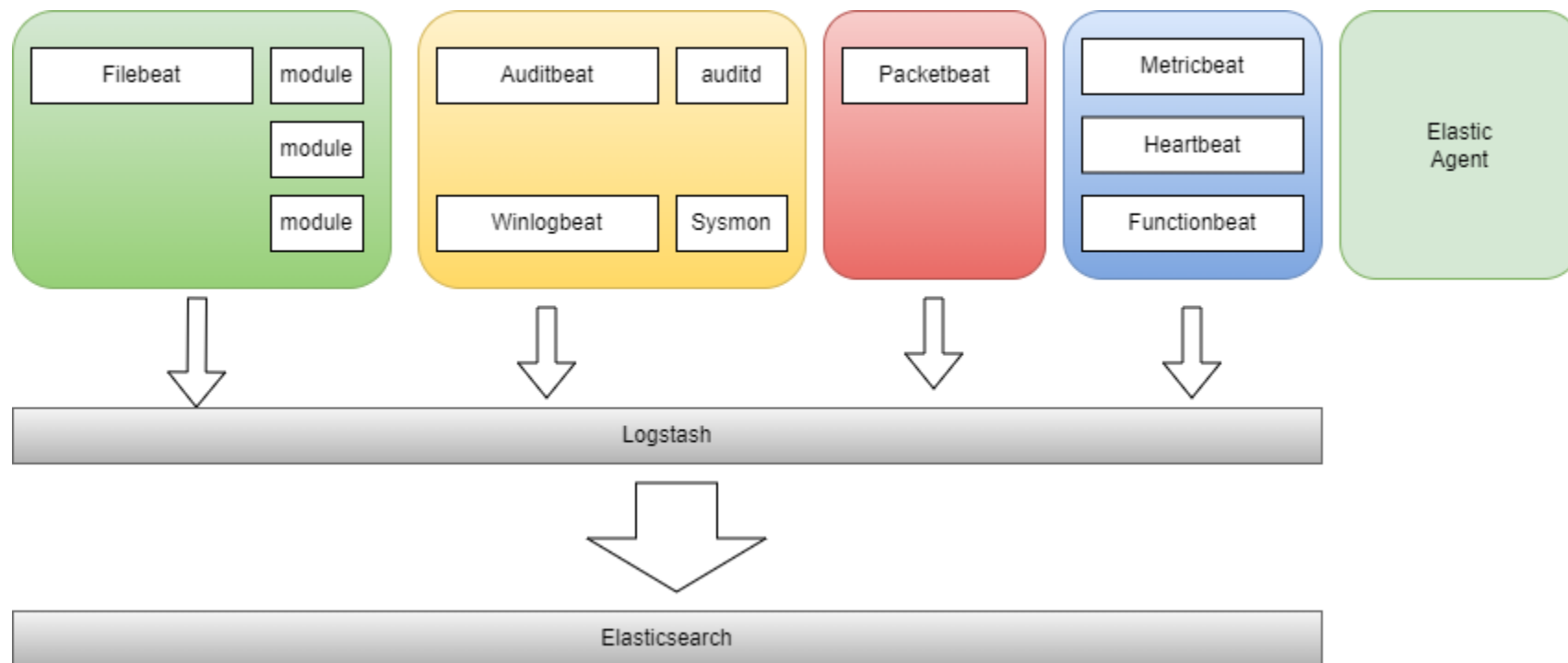


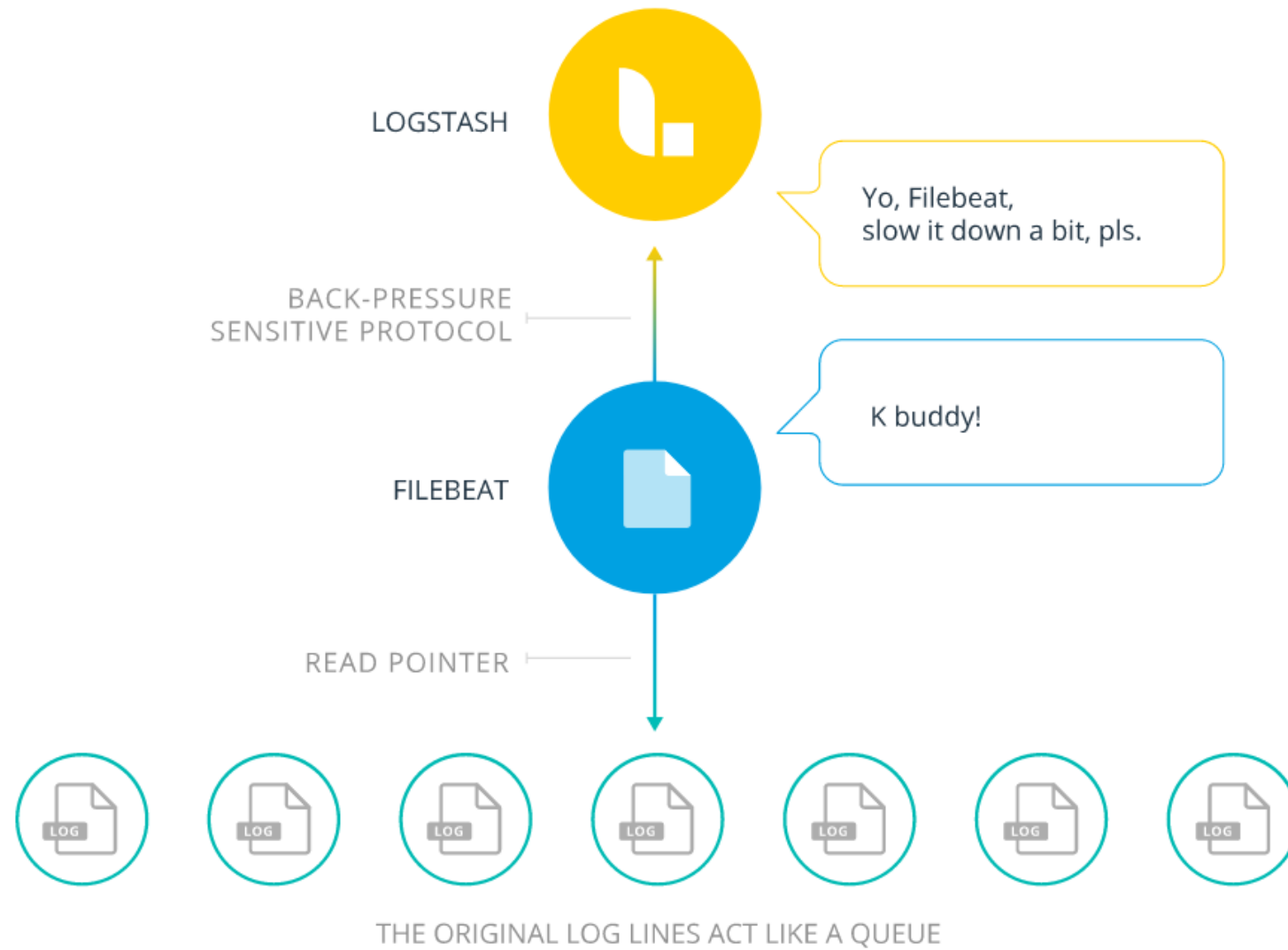


Magic Quadrant for Security Information and Event Management



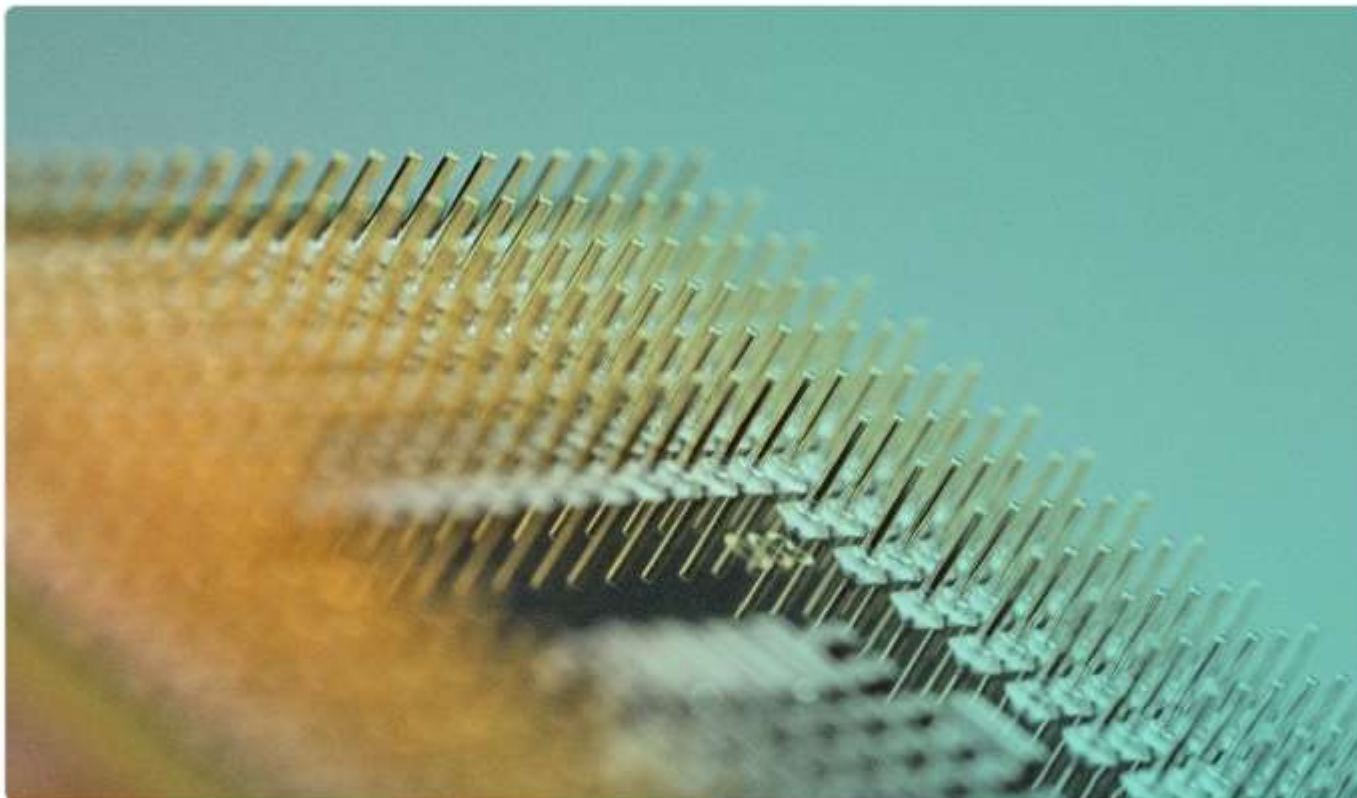








Ingesting threat data with the Threat Intel Filebeat module

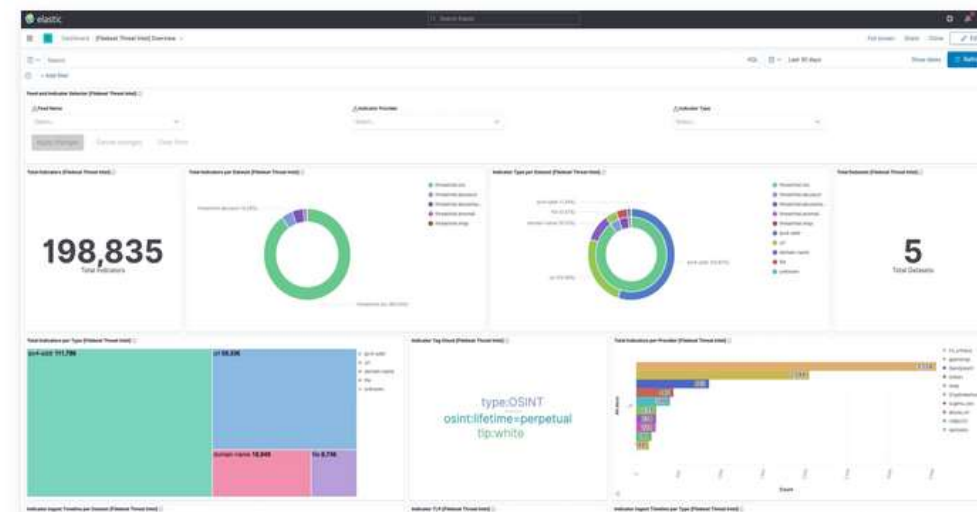


The ability for security teams to integrate threat data into their operations substantially helps their organization identify potentially malicious endpoint and network events using indicators identified by other threat research teams. In this blog, we'll cover how to ingest threat data with the Threat Intel Filebeat module. In future blog posts, we'll cover enriching threat data with the Threat ECS fieldset and

Using these capabilities, the [Threat Intel Filebeat module](#):

- Consumes threat data from six open source feeds
- Loads threat data into Elasticsearch
- Normalizes threat data into the [Threat ECS fieldset](#)
- Enables threat analysis through dashboards and visualizations

Analysts and threat hunters can use this data for raw threat hunting, enrichment, intelligence analysis and production, and detection logic.



The six feeds included with the 7.13 Filebeat Threat Intel module are as follows (additional feeds may be added in the future):

- [Abuse.ch Malware](#)
- [Abuse.ch URL](#)
- [AlienVault Open Threat Exchange \(OTX\)](#)
- [Anomali Limo](#)
- [Malware Bazaar](#)
- [Malware Information Sharing Platform \(MISP\)](#)



F5 module

Fortinet module

Google Cloud module

Google Workspace module

HAproxy module

IBM MQ module

Icinga module

IIS module

Imperva module

Infoblox module

Iptables module

Juniper module

Kafka module

Kibana module

Logstash module

Microsoft module

MISP module

MongoDB module

MSSQL module

MySQL module

MySQL Enterprise module

NATS module

NetFlow module

Netscout module

Nginx module

Office 365 module

Okta module

Oracle module

Osquery module

Palo Alto Networks module

[Elastic Docs](#) > [Filebeat Reference \[8.7\]](#) > [Modules](#)

F5 module



This functionality is in technical preview and may be changed or removed in a future release. Elastic will apply best effort to fix any issues, but features in technical preview are not subject to the support SLA of official GA features.

Prefer to use Elastic Agent for this use case?

Refer to the [Elastic Integrations documentation](#).

► [Learn more](#)

This is a module for F5 network device's logs. It includes the following filesets for receiving logs over syslog or read from a file:

- `bigipapm` fileset: supports F5 Big-IP Access Policy Manager.
- `bigipafm` fileset: supports F5 Big-IP Advanced Firewall Manager.



Read the [quick start](#) to learn how to configure and run modules.

Configure the module



You can further refine the behavior of the `f5` module by specifying [variable settings](#) in the `modules.d/f5.yml` file, or overriding settings at the command line.

You must enable at least one fileset in the module. **Filesets are disabled by default.**

Variable settings



Each fileset has separate variable settings for configuring the behavior of the module. If you don't specify variable settings, the `f5` module uses the defaults.

For advanced use cases, you can also override input settings. See [Override input settings](#).



When you specify a setting at the command line, remember to prefix the setting with the module name, for example, `f5.bigipapm.var.paths` instead of `bigipapm.var.paths`.

On this page

Configure the module

[Variable settings](#)[bigipapm fileset settings](#)[bigipafm fileset settings](#)[Fields](#)

Most Popular

VIDEO

[Get Started with Elasticsearch](#)

VIDEO

[Intro to Kibana](#)

VIDEO

[ELK for Logs & Metrics](#)



Options New Open Share Alerts Inspect Save

packetbeat-*

Filter your data using KQL syntax

Last 15 minutes Refresh

Search field names

Filter by type 0

Available fields

@_id

@_index

#_score

@timestamp

agent.ephemeral_id

agent.hostname

agent.id

agent.name

agent.type

agent.version

2,478 hits

Documents Field statistics BETA

Get the best look at your search results

Add relevant fields, reorder and sort columns, resize rows, and more in the document table.

Take the tour Dismiss

1 field sorted

	↓ @timestamp	Document
✓	Sep 18, 2022 @ 21:10:28.130	@timestamp Sep 18, 2022 @ 21:10:28.130 agent.ephemeral_id 4a4260a1-d44b-4cda-bb0e-a490b118b15e agent.hostname DESKTOP-00JSM52 agent.id 7c2db744-2177-411a-92fd-9a3e9ac3f6b0 agent.name DESKTOP-



Time	host.name	file.path	event.action
> Apr 23, 2023 @ 03:02:29.223		/etc/shadow	attributes_modified
> Apr 22, 2023 @ 23:03:39.363		/etc/shadow	attributes_modified
> Apr 22, 2023 @ 21:04:33.912		/etc/shadow	attributes_modified
> Apr 22, 2023 @ 21:03:24.840		/etc/shadow	attributes_modified
> Apr 22, 2023 @ 16:03:14.652		/etc/shadow	attributes_modified
> Apr 22, 2023 @ 16:02:43.869		/etc/shadow	attributes_modified
> Apr 22, 2023 @ 16:02:25.445		/etc/shadow	attributes_modified
> Apr 22, 2023 @ 16:02:23.903		/etc/shadow	attributes_modified
> Apr 22, 2023 @ 16:02:23.414		/etc/shadow	attributes_modified
> Apr 22, 2023 @ 10:16:53.731		/etc/shadow	attributes_modified
> Apr 22, 2023 @ 01:32:11.987		/etc/shadow	attributes_modified
> Apr 17, 2023 @ 11:16:37.154		/etc/shadow	updated, attributes_modified
> Apr 17, 2023 @ 05:33:08.909		/etc/shadow	attributes_modified
> Apr 17, 2023 @ 05:33:06.905		/etc/shadow	attributes_modified

event.action: executed + Add filter

auditbeat-*

Search field names

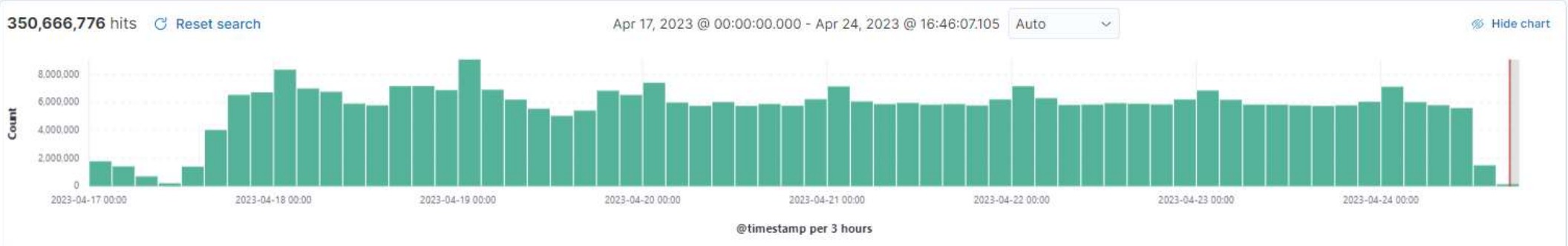
Filter by type 0

Selected fields 6

- host.name
- auditd.summary.actor.primary
- process.args
- process.working_directory
- user.group.name
- user.name

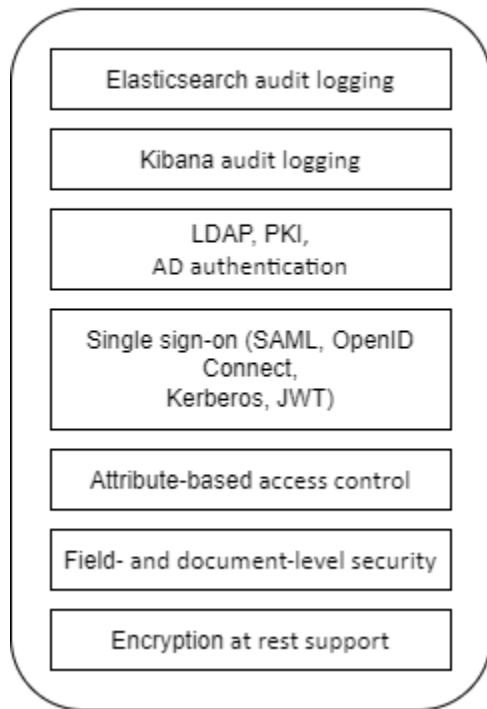
Available fields 89

- Popular
- agent.name
 - event.action
 - event.category
 - event.module
 - file.path
 - host.hostname
 - _id
 - _index
 - _score
 - _type
 - @timestamp
 - @version
 - agent.ephemeral_id
 - agent.hostname
 - agent.id

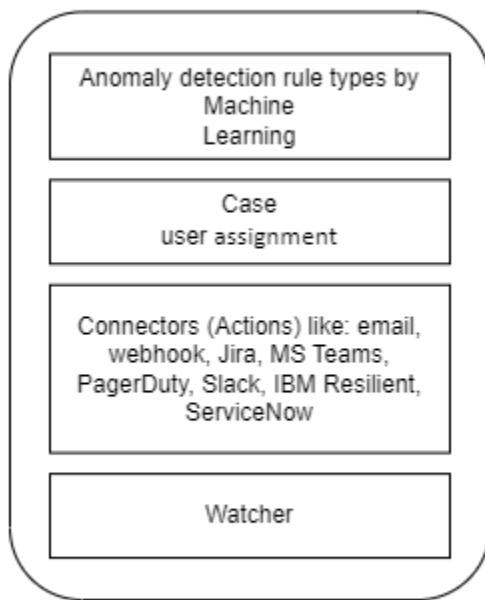


Time	host.name	auditd.summary.actor.primary	process.args	process.working_directory	user.group.name	user.name
> Apr 24, 2023 @ 15:41:04.267		kubao99	/oracle/middleware/web12213/wlserver/..ohs/bin/launch, -p, 3676 6	/app13w/oracle/wlsdomain/ohs/no demanager	dba	oracle
> Apr 24, 2023 @ 15:41:01.562		nagios	uname, -m	/home/nagios	nagios	nagios
> Apr 24, 2023 @ 15:41:01.520		nagios	ls, /etc/bash_completion.d	/home/nagios	nagios	nagios
> Apr 24, 2023 @ 15:41:01.509		nagios	/usr/bin/logname	/home/nagios	nagios	nagios
> Apr 24, 2023 @ 15:41:01.508		nagios	/usr/bin/logname	/home/nagios	nagios	nagios
> Apr 24, 2023 @ 15:41:01.507		nagios	/usr/bin/test, -z, t1idmas1	/home/nagios	nagios	nagios
> Apr 24, 2023 @ 15:41:01.505		nagios	hostname	/home/nagios	nagios	nagios
> Apr 24, 2023 @ 15:41:01.504		nagios	/usr/bin/test, 10000, =, 0	/home/nagios	nagios	nagios
> Apr 24, 2023 @ 15:41:01.501		nagios	/bin/sh, /usr/bin/egrep, (^dba\$ ^dba dba dba\$)	/home/nagios	nagios	nagios
> Apr 24, 2023 @ 15:41:01.499		nagios	grep, -E, (^postgres ^postgres postgres postgres\$)	/home/nagios	nagios	nagios

Security



Alerting



Free and open - Basic ¹₂

Platinum

Enterprise

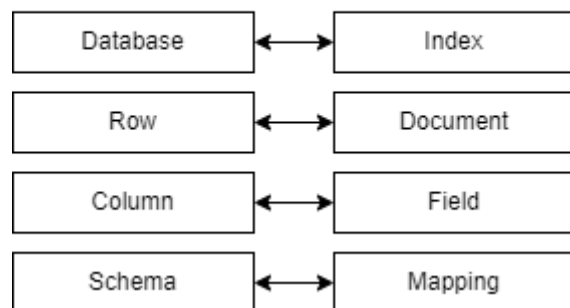
Gold
(Discontinued)⁹ ⓘ

ELASTIC STACK OPERATIONS & MANAGEMENT

Storage types

Inverted index (for search)	✓	✓	✓	✓
Evaluating calculated fields at index time	✓	✓	✓	✓
Runtime fields	✓	✓	✓	✓

Relační DB vs. Elasticsearch

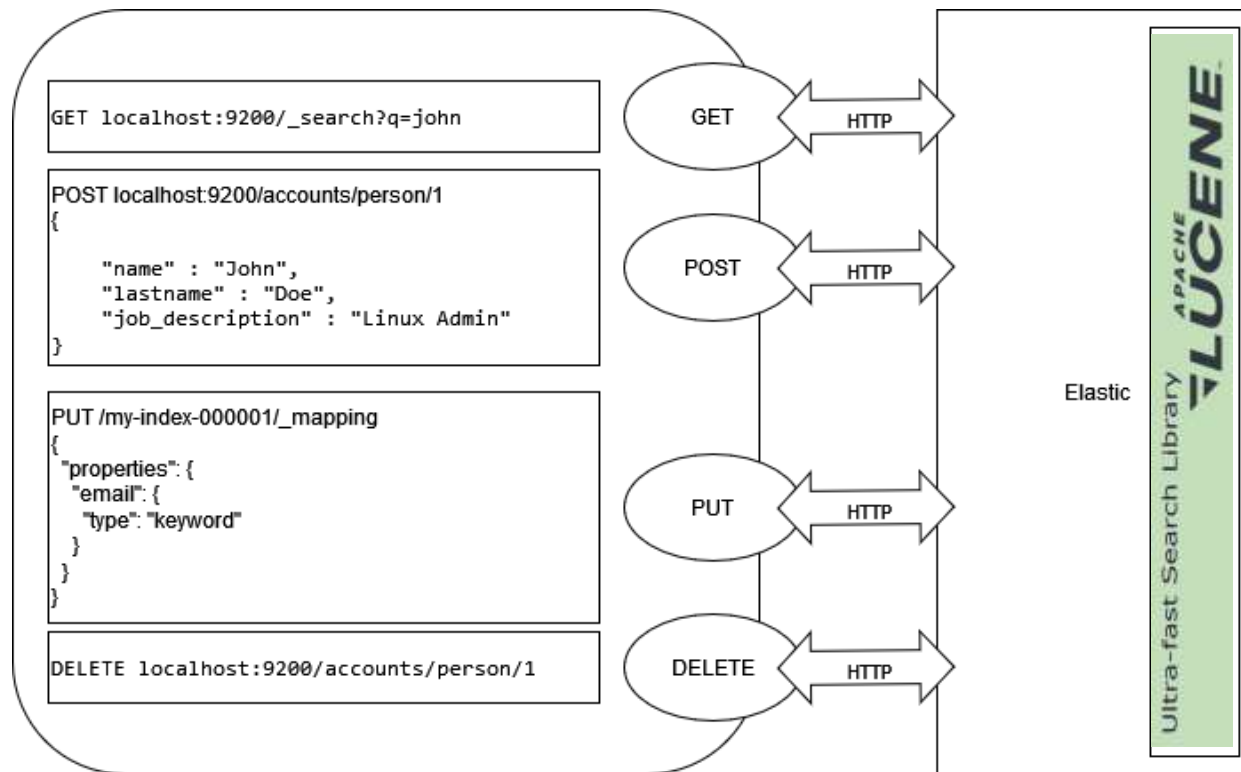


XML

```
<empinfo>
  <employees>
    <employee>
      <name>James Kirk</name>
      <age>40</age>
    </employee>
    <employee>
      <name>Jean-Luc Picard</name>
      <age>45</age>
    </employee>
    <employee>
      <name>Wesley Crusher</name>
      <age>27</age>
    </employee>
  </employees>
</empinfo>
```

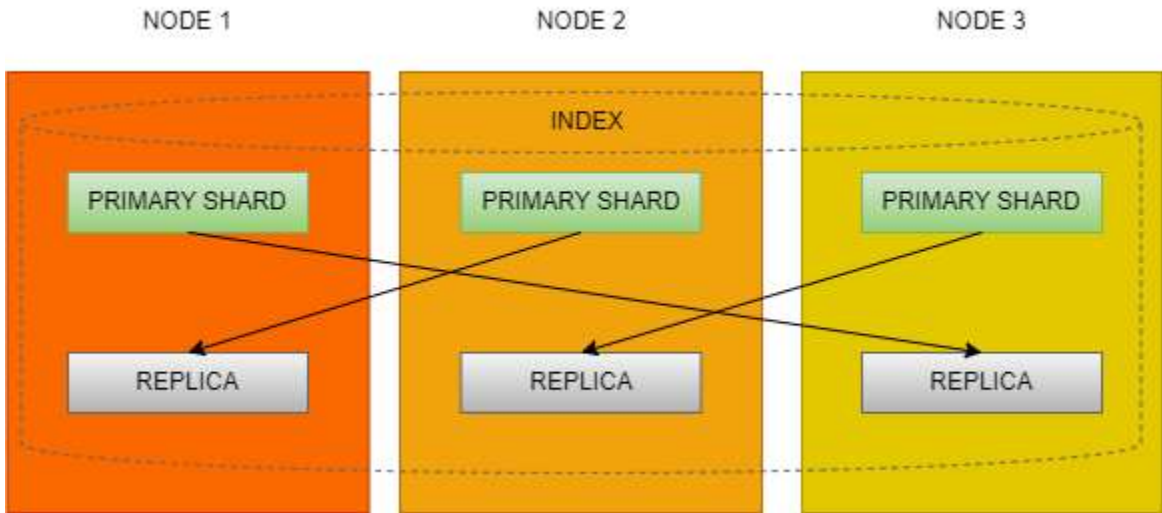
JSON

```
{ "empinfo" :
  {
    "employees" : [
      {
        "name" : "James Kirk",
        "age" : 40,
      },
      {
        "name" : "Jean-Luc Picard",
        "age" : 45,
      },
      {
        "name" : "Wesley Crusher",
        "age" : 27,
      }
    ]
  }
}
```



GET /

```
{  
  "name" : "d1  
  "cluster_name" :  
  "cluster_uuid" :  
  "version" : {  
    "number" : "7.17.2",  
    "build_flavor" : "default",  
    "build_type" : "docker",  
    "build_hash" : "de7261de50d90919ae53b0eff9413fd7e5307301",  
    "build_date" : "2022-03-28T15:12:21.446567561Z",  
    "build_snapshot" : false,  
    "lucene_version" : "8.11.1",  
    "minimum_wire_compatibility_version" : "6.8.0",  
    "minimum_index_compatibility_version" : "6.0.0-beta1"  
  },  
  "tagline" : "You Know, for Search"  
}
```



GET `/_cat/shards/my_index`

index_name	shard_id	state	docs	store	ip	node_name
my_index	0	STARTED	21234	100.2mb	192.168.1.100	node1
my_index	1	STARTED	25678	200.1mb	192.168.1.101	node2
my_index	2	STARTED	29101	100.8mb	192.168.1.102	node3

Management

Ingest

Ingest Node Pipelines

Data

Index Management

Index Lifecycle Policies

Snapshot and Restore

Rollup Jobs

Transforms

Remote Clusters

Alerts and Insights

Rules and Connectors

Reporting

Security

Users

Roles

API keys

Kibana

Index Patterns

Saved Objects

Tags

Search Sessions

Spaces

Advanced Settings

Index Management

Index Management docs

Indices

Data Streams

Index Templates

Component Templates

Update your Elasticsearch indices individually or in bulk. [Learn more.](#)

☐ Include rollup indices
☐ Include hidden indices

2 indices have lifecycle errors

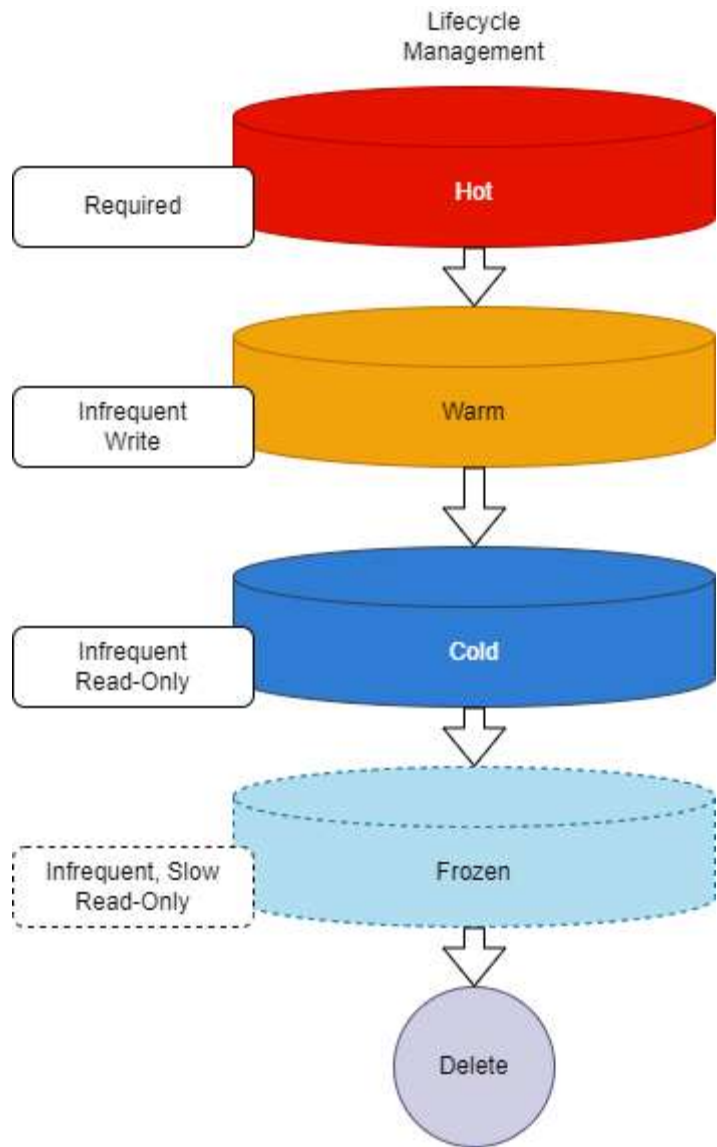
Show errors

Lifecycle status

Lifecycle phase

Reload indices

<input type="checkbox"/> Name ↑	Health	Status	Primaries	Replicas	Docs count	Storage size	Data stream
<input type="checkbox"/> syslog-proxy-202206	<div>green</div>	open	8	0	271260801	129.5gb	
<input type="checkbox"/> syslog-proxy-202207	<div>green</div>	open	8	0	227570045	108.2gb	
<input type="checkbox"/> syslog-proxy-202208	<div>green</div>	open	8	0	755894055	366.7gb	
<input type="checkbox"/> syslog-proxy-202209	<div>green</div>	open	8	0	864632133	431.2gb	
<input type="checkbox"/> syslog-proxy-202210	<div>green</div>	open	8	0	934454504	459.7gb	
<input type="checkbox"/> syslog-proxy-202211	<div>green</div>	open	8	0	797886742	400.8gb	
<input type="checkbox"/> syslog-proxy-202212	<div>green</div>	open	8	0	792882181	369.3gb	
<input type="checkbox"/> syslog-proxy-202301	<div>green</div>	open	8	0	934128988	480.7gb	
<input type="checkbox"/> syslog-proxy-202302	<div>green</div>	open	8	0	564933327	307.7gb	
<input type="checkbox"/> syslog-proxy-202303	<div>yellow</div>	open	8	1	894992723	880.1gb	



Management

Ingest

Ingest Node Pipelines

Data

Index Management

[Index Lifecycle Policies](#)

Snapshot and Restore

Rollup Jobs

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Kibana

Index Patterns

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Search Sessions

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Advanced Settings

Stack

License Management

Edit policy syslog-proxy-lifecycle

[Documentation](#)

You are editing an existing policy. Any changes you make will affect the indices that are attached to this policy. Alternatively, you can save these changes in a new policy.

☐ Save as new policy

Policy summary

This policy moves data through the following phases. [Learn about timing](#)



Hot phase Required

Store your most recent, most frequently-searched data in the hot tier. The hot tier provides the best indexing and search performance by using the most powerful, expensive hardware.

[Advanced settings](#)



☒ Warm phase

Move data into phase when: days old

Move data to the warm tier when you are still likely to search it, but infrequently need to update it. The warm tier is optimized for search performance over indexing performance.

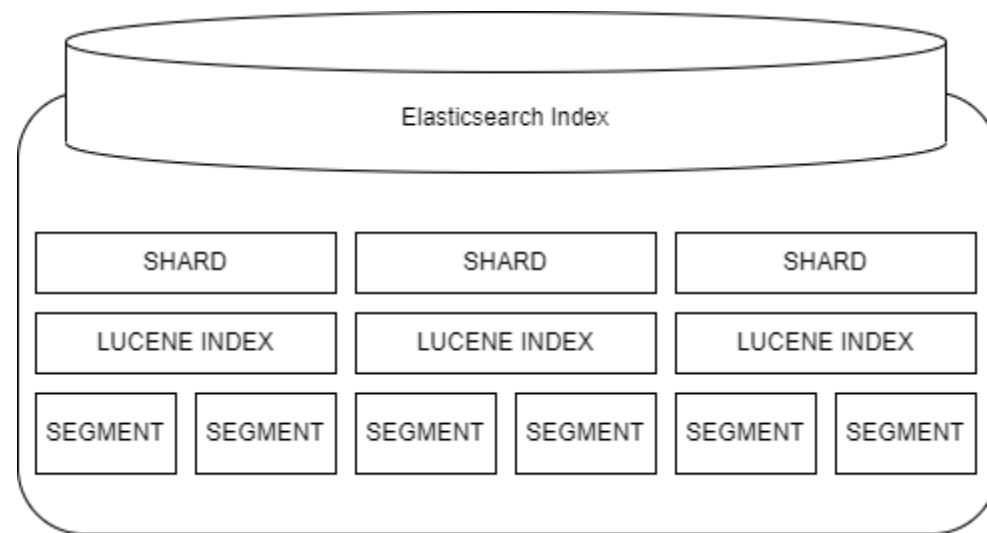
[Advanced settings](#)

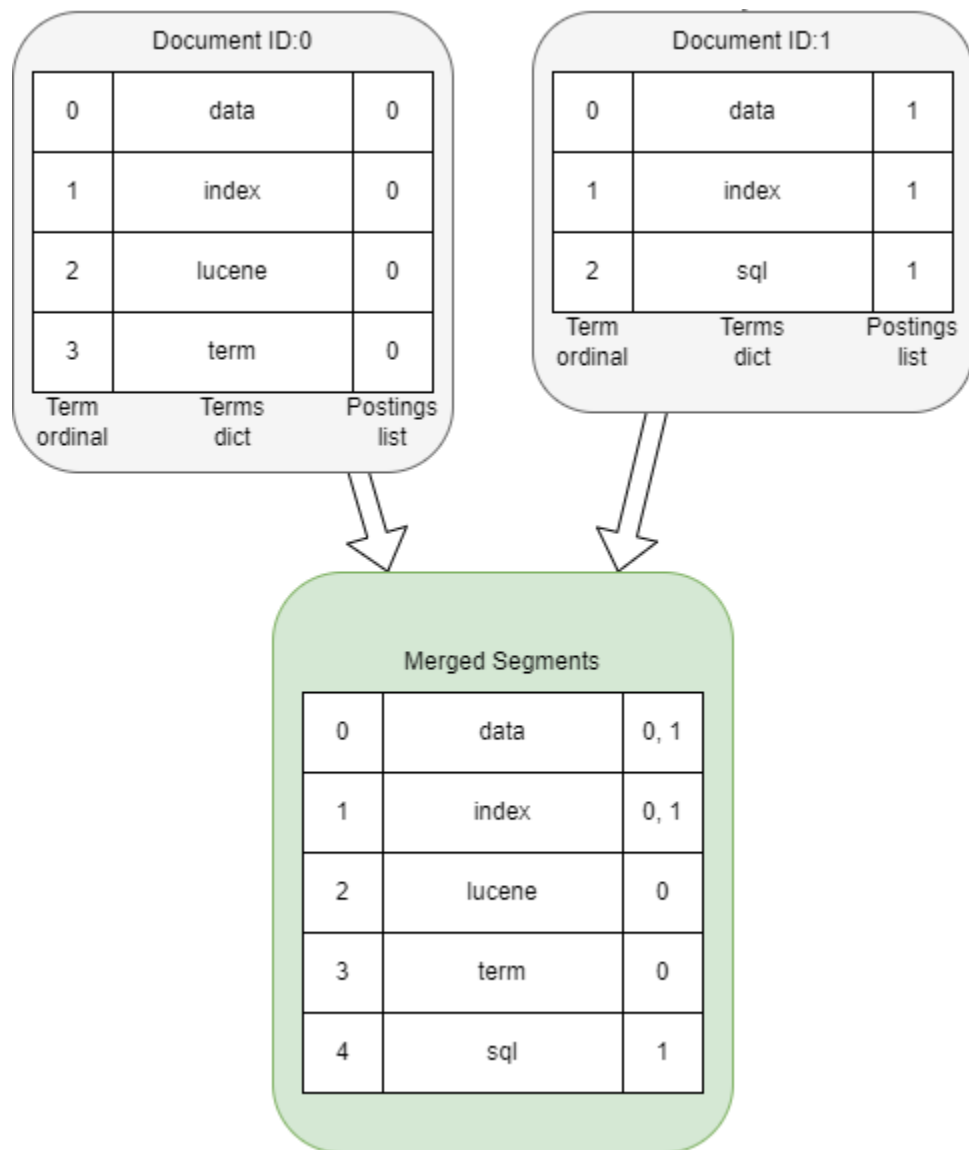
Replicas

Set the number of replicas. Remains the same as the previous phase by default.

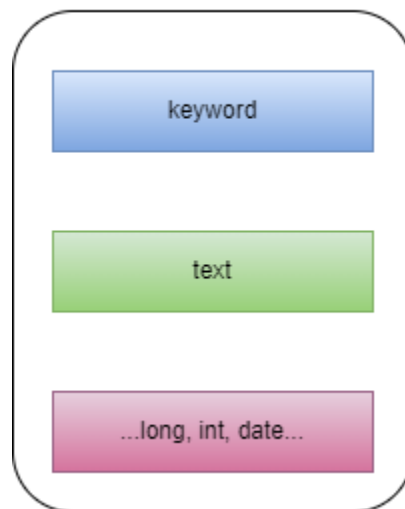
Number of replicas

☒ Set replicas

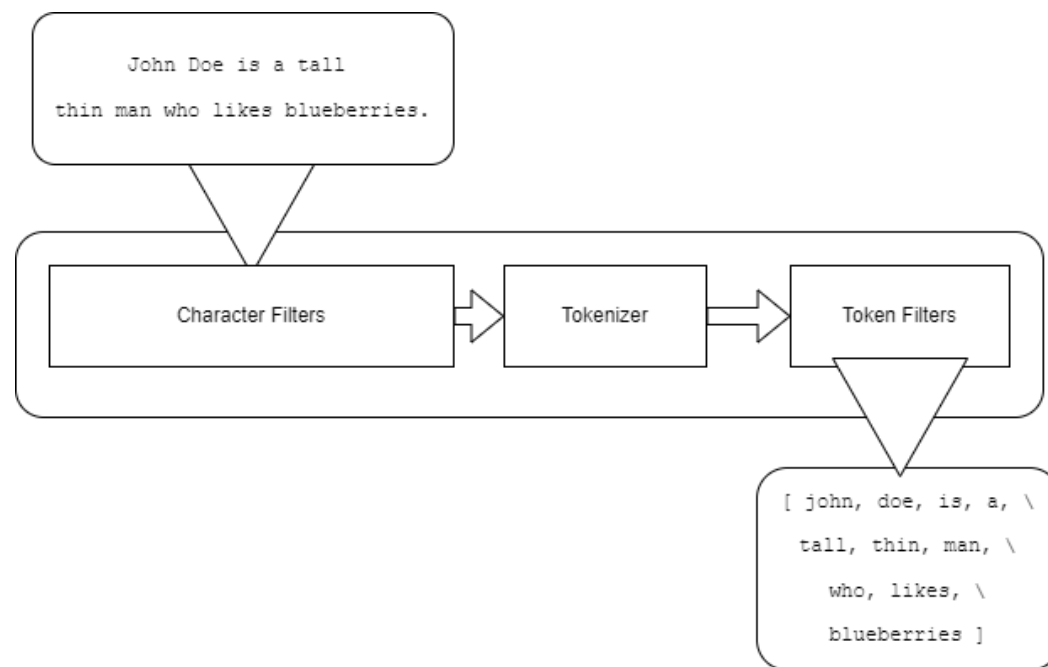




Datatypes

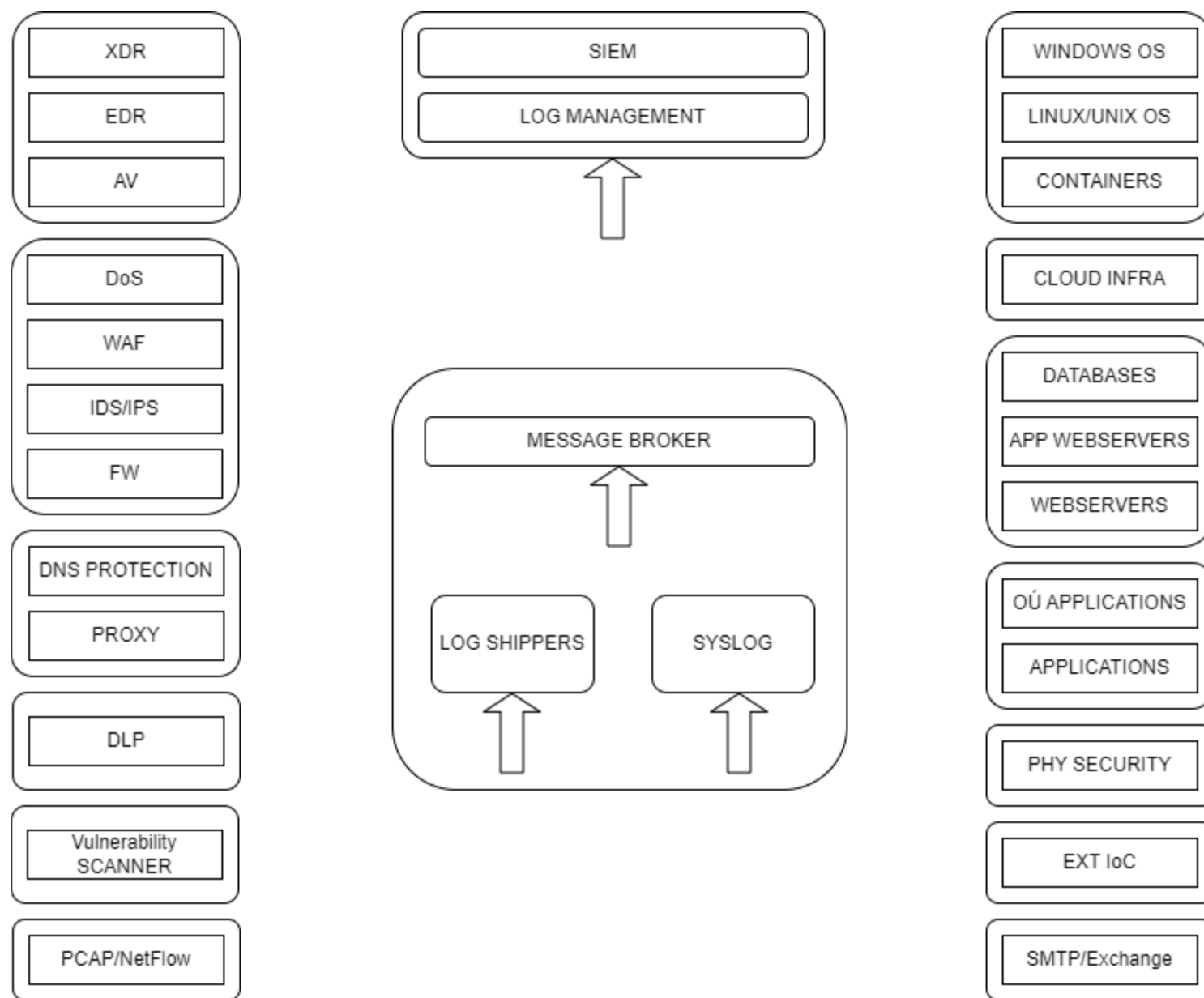


```
curl -XPUT 'http://localhost:9200/twitter/_doc/_mapping' -H 'Content-Type: application/json' -d '{
  "_doc" : {
    "properties" : {
      "user" : {"type" : "keyword", "null_value" : "na"},
      "message" : {"type" : "text"},
      "postDate" : {"type" : "date"},
      "priority" : {"type" : "integer"},
      "rank" : {"type" : "float"}
    }
  }
}
```

```
GET /talk-demo-index/_analyze
{
  "text": "John Doe is a tall thin man who likes blueberries."
}
```

```
{
  "tokens" : [
    {
      "token" : "john",
      "start_offset" : 0,
      "end_offset" : 4,
      "type" : "<ALPHANUM>",
      "position" : 0
    },
    {
      "token" : "doe",
      "start_offset" : 5,
      "end_offset" : 8,
      "type" : "<ALPHANUM>",
      "position" : 1
    },
  ],
}
```



CEF

Common Event Format
(ArcSight CEF)

ECS

Elastic Common
Scheme

OSSEM

Open Source Security
Events Metadata

ASIM

Advanced Security
Information Model

```
CEF:0|MyCompany|WebServer|1.0|100|Web Access|6|\  
src=192.168.0.1 spt=443 dst=10.0.0.1 dpt=8080 \  
requestMethod=GET returnUrl=/index.html
```

```
{  
  "@timestamp": "2023-04-25T15:23:00.000Z",  
  "event": {  
    "category": "web",  
    "action": "access"  
  },  
  "source": {  
    "ip": "192.168.0.1",  
    "port": 443  
  },  
  "destination": {  
    "ip": "10.0.0.1",  
    "port": 8080  
  }  
}
```

```
{  
  "event": {  
    "id": "d08fa6f2-bb8f-42fd-b7fd-f5610c04dc25",  
    "category": ["access"],  
    "type": ["web"],  
    "severity": "info",  
    "timestamp": "2023-04-25T15:23:00.000Z"  
  },  
  "source": {  
    "ip": "192.168.0.1",  
    "port": 443  
  },  
  "destination": {  
    "ip": "10.0.0.1",  
    "port": 8080  
  }  
}
```


Lockheed Marting Kill Chain



MITRE ATT&CK Matrix



Technique	Sub-Technique
Phishing	Spearphishing Attachment
	Spearphishing Link
	Spearphishing Service
Valid Accounts	Default Account
	Domain Accounts
	Local Accounts
	Cloud Accounts

MITRE | ATT&CK®

[Matrices](#)
[Contribute](#)
[Tactics](#) ▾

[Techniques](#) ▾

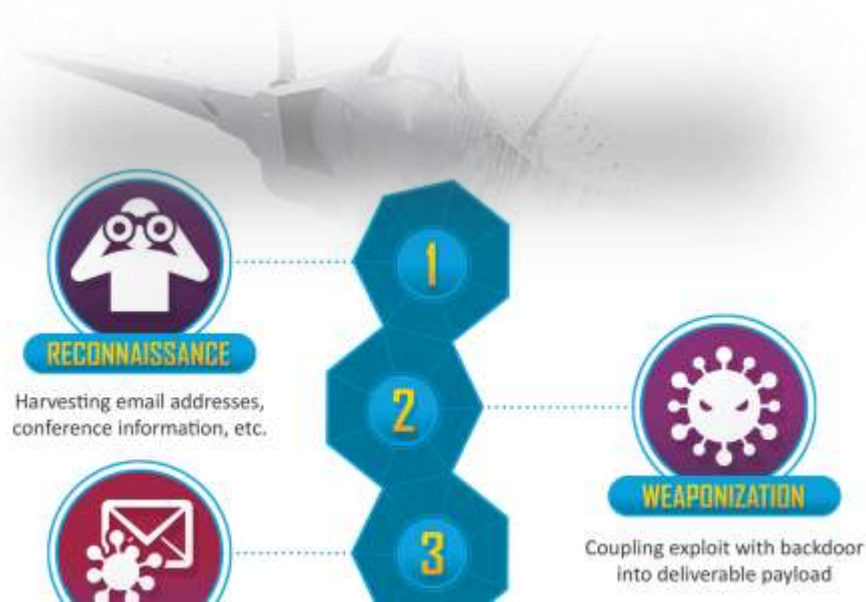
[Data Sources](#)

ATT&CK v12 is now live! [Check it out](#)

MITRE ATT&CK® is a globally-accessible knowledge base of adversary tactics and techniques based on real-world observations. The ATT&CK knowledge base is used as a foundation for the development of specific threat models and methodologies in the private sector, in government, and in the cybersecurity product and service community.

With the creation of ATT&CK, MITRE is fulfilling its mission to solve problems for a safer world — by bringing communities together to develop more effective cybersecurity. ATT&CK is open and available to any person or organization for use at no charge.

ATT&CK®



KQL

KQL was created by Elastic as a way to search through Elasticsearch data in Kibana. While searching with Lucene is available, KQL has a lower barrier for entry and can even suggest fields, operators, or values based on what is available in dataset.

```
event.category: network AND  
source.port: [5000 to 7000]
```

Lucene

Lucene Query Language can perform REGEX queries (i.e. subdomain with exactly three characters, and another subdomain with exactly eight digits).

```
[a-z]{3}.stage.[0-9]{8}
```

EQL

At high level, EQL allows you to express relationships (as sequences, times, and categories) between events.

```
sequence by  
process.entity_id with  
maxspan = 1m
```

[metadata]

```
creation_date = "2022/09/14"
integration = ["system"]
maturity = "production"
min_stack_comments = "New fields added: required_fields, related_integrations, setup"
min_stack_version = "8.3.0"
updated_date = "2023/02/22"
```

[rule]

```
from = "now-9m"
index = ["auditbeat-*", "logs-system.auth-*"]
language = "eq"
name = "Potential Linux SSH Brute Force Detected"
risk_score = 47
rule_id = "1c27fa22-7727-4dd3-81c0-de6da5555feb"
severity = "medium"
tags = ["Elastic", "Host", "Linux", "Threat Detection", "Credential Access"]
type = "eq"
query = ""
sequence by host.id, source.ip, user.name with maxspan=10s
[authentication where host.os.type == "linux" and event.action in ("ssh_login", "user_login") and
 event.outcome == "failure" and source.ip != null and source.ip != "0.0.0.0" and source.ip != ":::" ] with runs=10
""
```

[[rule.threat]]

```
framework = "MITRE ATT&CK"
```

[[rule.threat.technique]]

```
id = "T1110"
name = "Brute Force"
reference = "https://attack.mitre.org/techniques/T1110/"
```

[[rule.threat.technique.subtechnique]]

```
id = "T1110.001"
name = "Password Guessing"
reference = "https://attack.mitre.org/techniques/T1110/001/"
```

[[rule.threat.technique.subtechnique]]

```
id = "T1110.003"
name = "Password Spraying"
reference = "https://attack.mitre.org/techniques/T1110/003/"
```

[rule.threat.tactic]

```
id = "TA0006"
name = "Credential Access"
reference = "https://attack.mitre.org/tactics/TA0006/"
```

Security

Overview

Detect

- Alerts
- Rules
- Exceptions

Explore

- Hosts
- Network

Investigate

- Timelines
- Cases

Manage

- Endpoints
- Trusted applications
- Event filters

Search KQL Today Show dates Refresh

signal.rule.name: Execution of Persistent Suspicious Program [Duplicate] + Add filter

Data sources

Recent cases

můžete se prosím podívat windows\system32(A6D608F0-0BDE-491A-97AE-5C4B05D86E01).bat", o co se jedná?
Dle detekce na tento soubor byl nastaven skrytý atribut pomocí příkazu : "attrib +R +H +S +A *.cul".

View all cases

Recent timelines

You haven't favorited any timelines yet. Get out there and start threat hunting!

View all timelines

Security news

Elastic Security Labs outlines an attack chain that leads to XWORM and AGENTTESLA
2023-04-07

Threat actors are deploying XWorm and Agent Tesla RATs using custom .NET loaders.

Elastic users protected from

Detection alert trend

Showing: 4 alerts



Stack by signal.rule.name View alerts

Execution of Persistent Suspicious Program [Duplicate]

External alert trend

Showing: 0 external alerts

Stack by event.module View alerts

All values returned zero

Events

Showing: 0 events

Stack by event.dataset View events

Rules

Rules Rule Monitoring

Upload value lists

Import rules

Create new rule

All rules

Updated 30 seconds ago

e.g. rule name

Tags 45

Elastic rules (568) Custom rules (19)

Showing 587 rules Selected 0 rules Select all 587 rules Bulk actions Refresh Refresh settings

<input type="checkbox"/>	Rule	Risk score	Severity	Last run	Last response	Last updated	Version	Tags	Activated	
<input type="checkbox"/>	Execution of File Written or Modified by Microsoft Office [Duplicate]	21	High	29 minutes ago	succeeded	Sep 6, 2021 @ 18:29:33.127	18	Elastic Execution Host	<input checked="" type="checkbox"/>	...
<input type="checkbox"/>	Network Scanning	50	Medium	30 minutes ago	succeeded	Sep 7, 2021 @ 09:32:21.489	4	—	<input checked="" type="checkbox"/>	...
<input type="checkbox"/>	Authorized Keys modified for Privileged User	73	High	26 minutes ago	succeeded	Sep 6, 2021 @ 15:26:03.473	2	—	<input checked="" type="checkbox"/>	...
<input type="checkbox"/>	Direct Outbound SMB Connection	47	Medium	5 minutes ago	succeeded	Aug 31, 2021 @ 19:23:33.920	6	Elastic Host Lateral Movement	<input checked="" type="checkbox"/>	...
<input type="checkbox"/>	Incoming DCOM Lateral Movement with ShellBrowserWindow or ShellWindows	47	Medium	5 minutes ago	succeeded	Aug 31, 2021 @ 19:06:10.859	2	Elastic Host Lateral Movement	<input checked="" type="checkbox"/>	...
						Aug 31, 2021 @ 19:21:08.660	10	Command and Control Elastic Host	<input checked="" type="checkbox"/>	...
						Aug 31, 2021 @ 19:00:37.696	10	Command and Control Elastic Host	<input checked="" type="checkbox"/>	...
						Aug 31, 2021 @ 19:18:23.431	4	Defense Evasion Elastic Host	<input checked="" type="checkbox"/>	...

Security

Overview

Detect

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Trusted applications

Event filters

Search

KQL

Today

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Refresh

+ Add filter

Hosts

Data sources

Hosts

3 812



User authentications

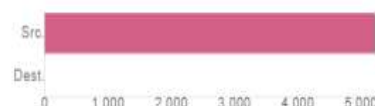
✓ 32 139 042 succ... ✗ 45 250 fail



Unique IPs

📍 5 223 source

📍 0 destination



All hosts Authentications Uncommon processes Events External alerts

Uncommon processes

Showing: 3 192 processes

Process name	Hosts	Instances	Host names	Last command	Last user
0server_scan_re	1	1		/bin/bash	root
+1 More					

Support

Actions

📍 AZURE - Ireland (northeurope) · Deployment ID 84d347 📄

Enable autoscaling

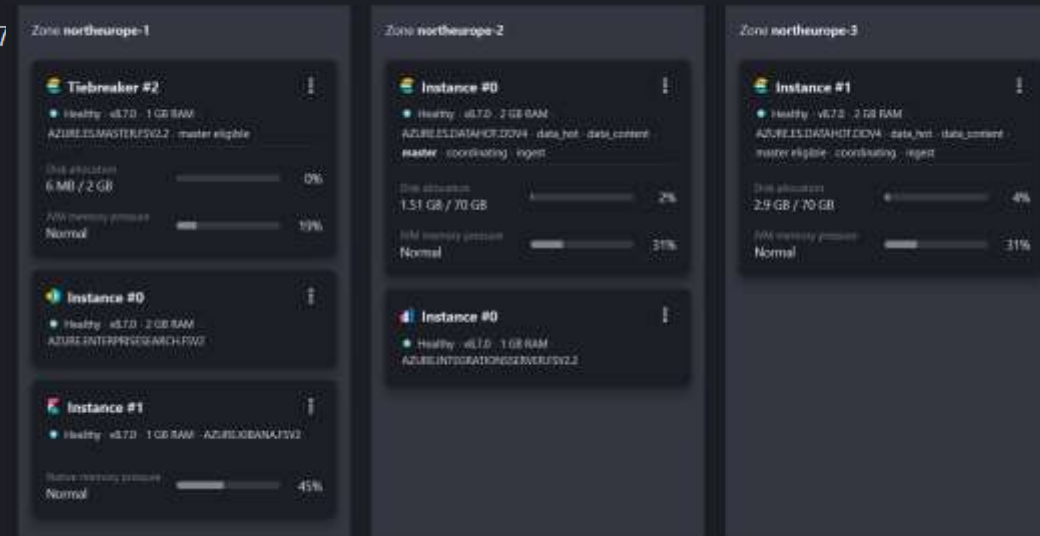
Edit

my-deployment-84d347

General purpose [Edit](#)

Copy component ID

Tags



Děkuji za pozornost



Další zdroje

- <https://github.com/TheHive-Project/TheHive>
- <https://www.misp-project.org/>

Koncept
Dokumentace instalace
Dokumentace datových zdrojů
SLA