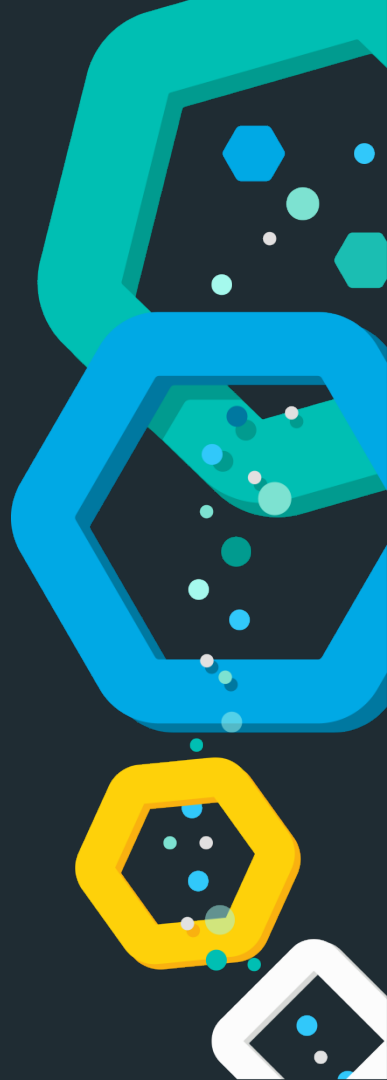
elastic{on}TOUR

Ingest

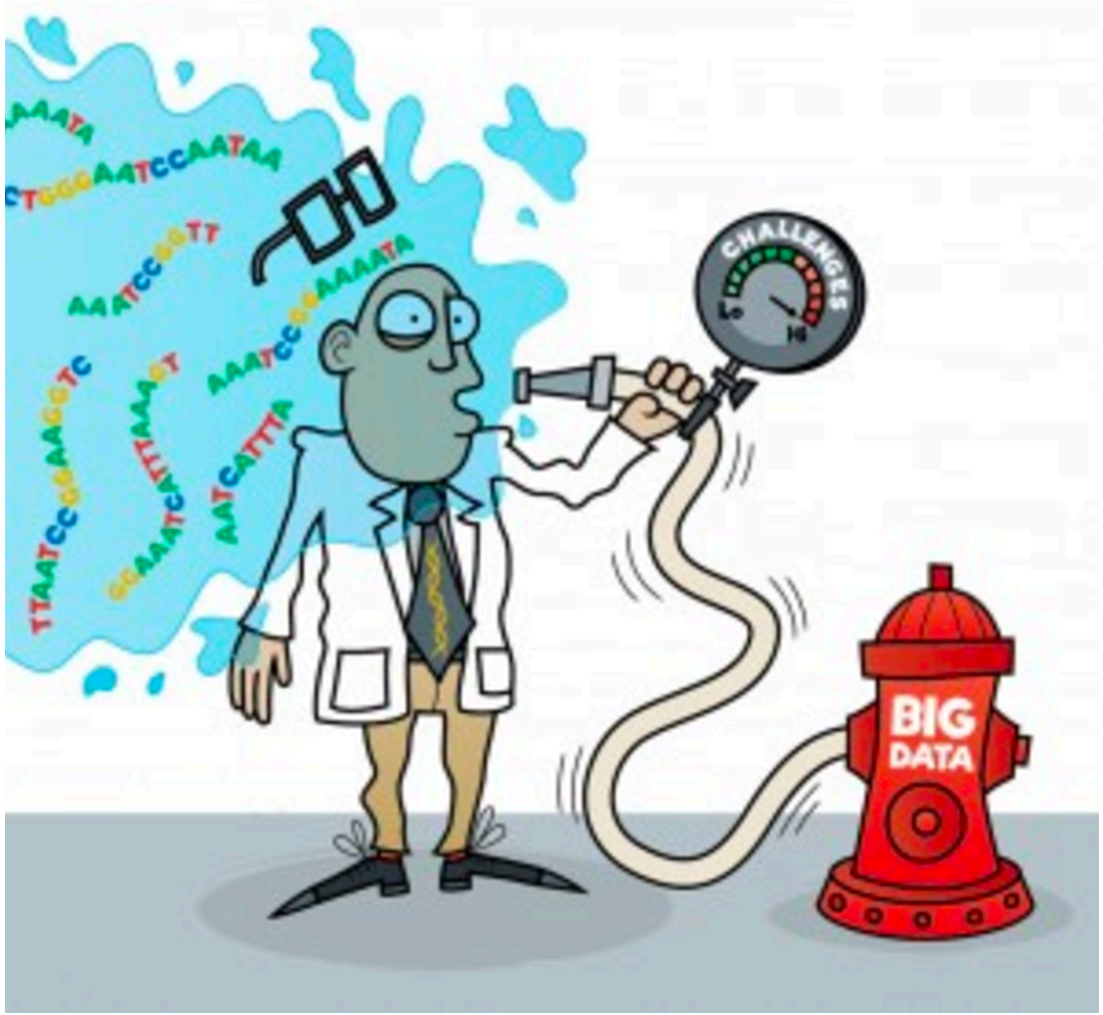
David Pilato, Developer | Evangelist

Paris, 31 Janvier 2017



Data Ingestion

The process of collecting and importing data for immediate use in a datastore



elastic


simple things
should be simple
elastic

Ingest Technologies

Elasticsearch

APIs

Ingest Node

Beats

Lightweight Data Shippers

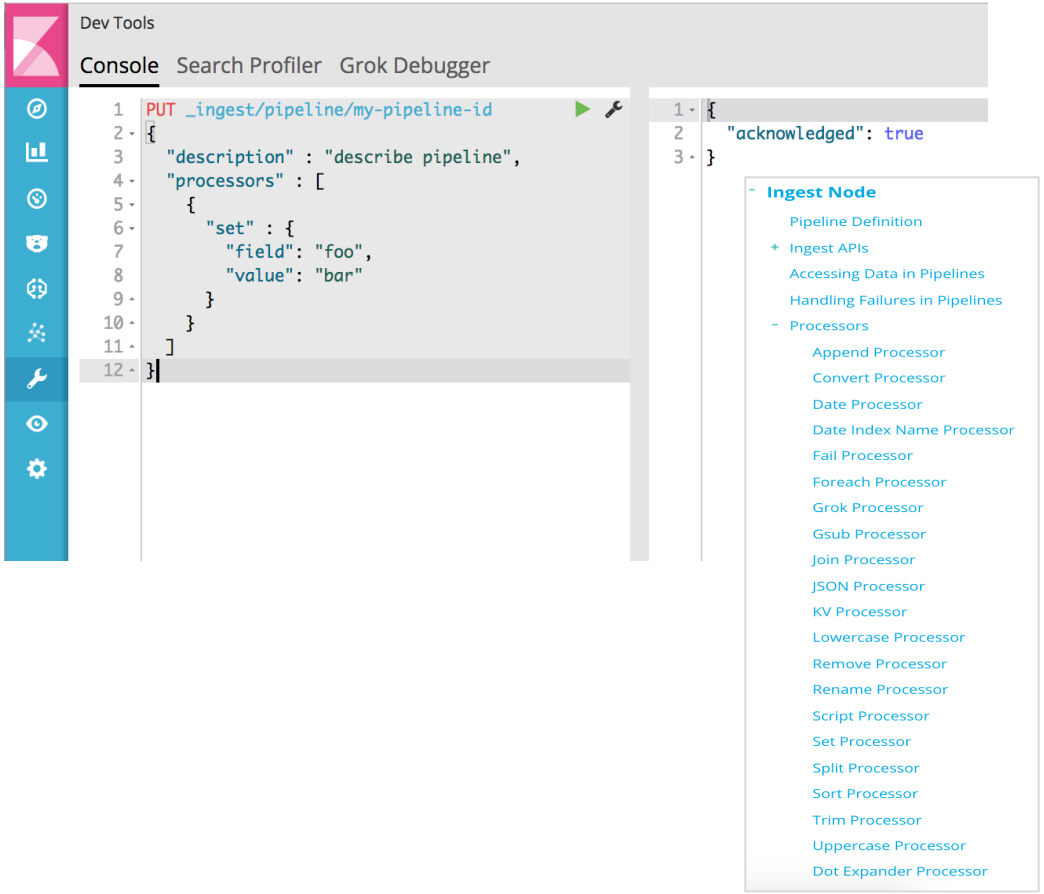
Logstash

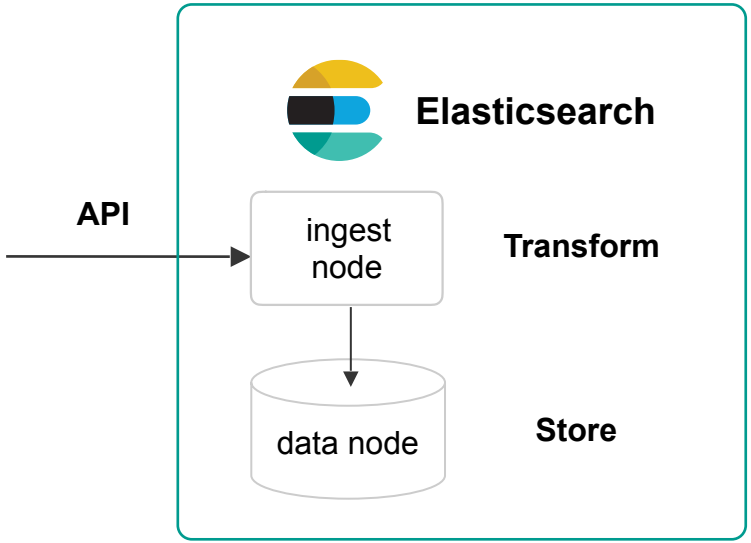
Centralized Data Collection Engine

ES-Hadoop

Hadoop Ecosystem Connector

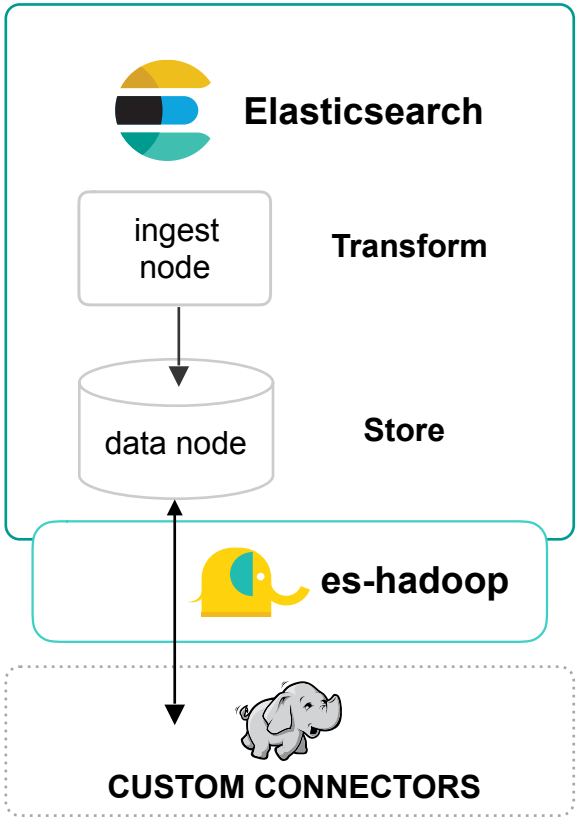
Elastic Ingestion Technologies





elastic

Elastic Ingestion Technologies



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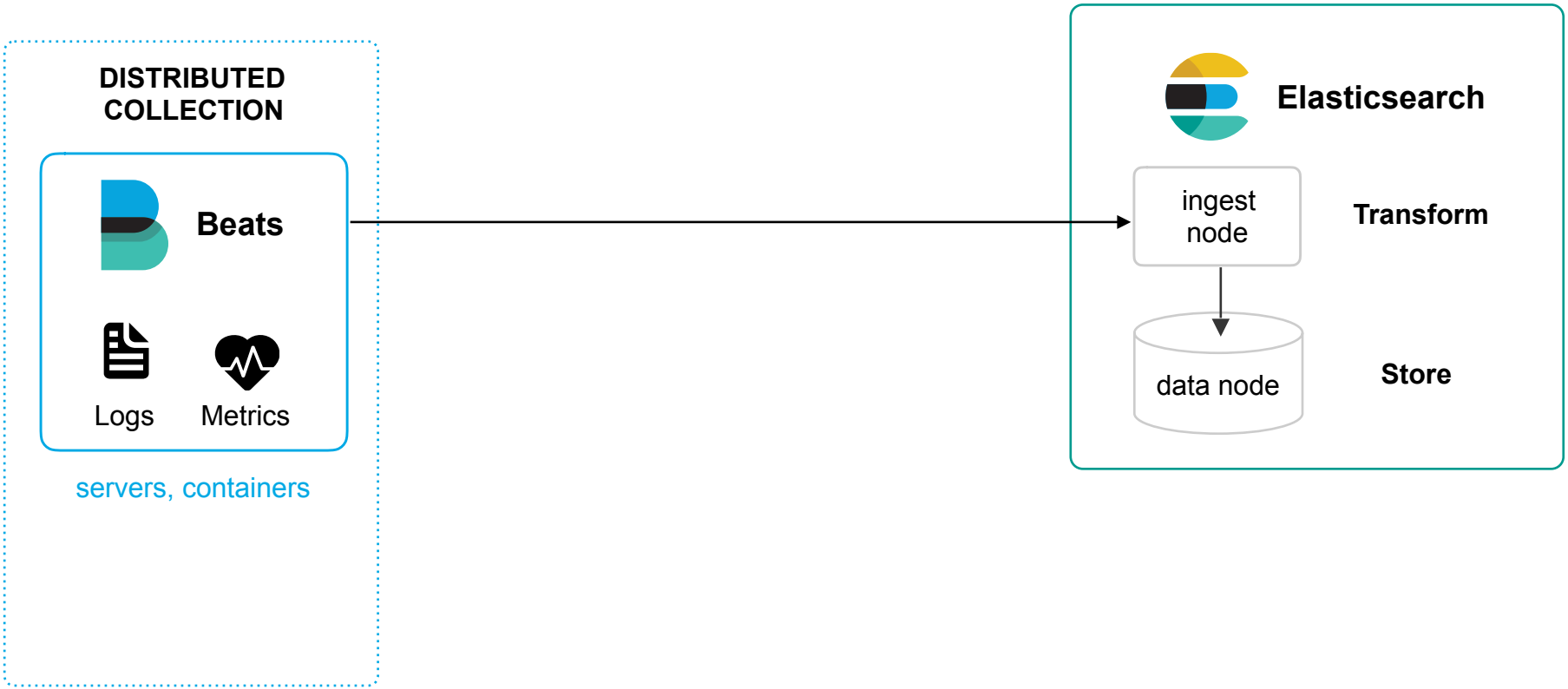
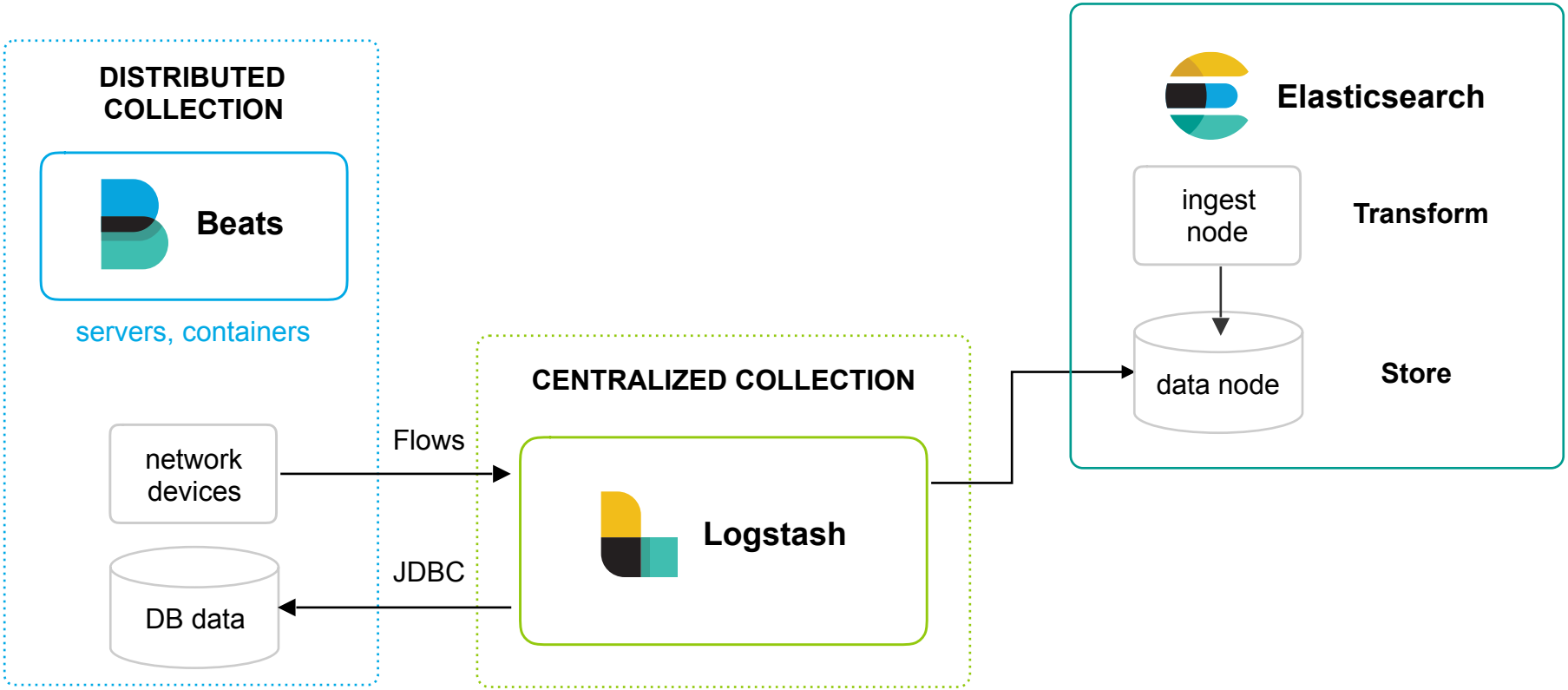
Elastic Ingestion Technologies



elastic

Elastic Ingestion Technologies



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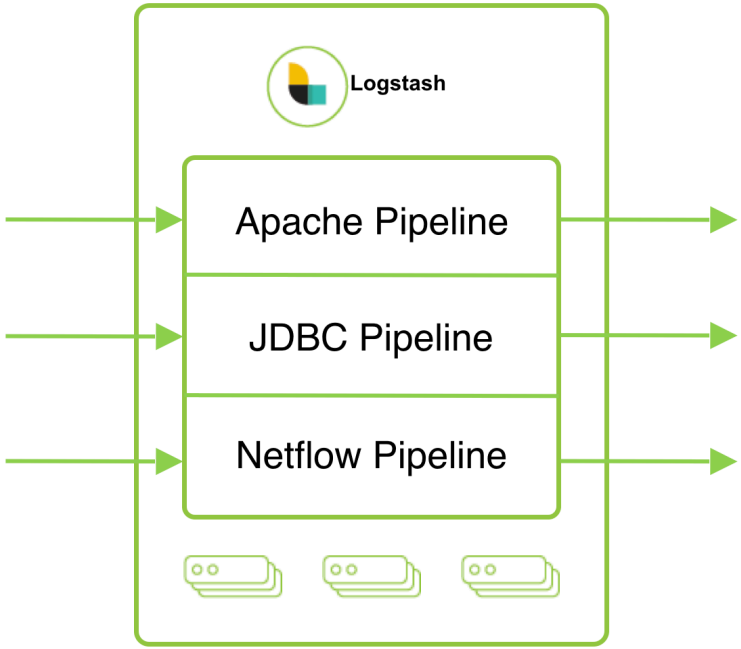
Ingestion Architecture

Scalable and robust centralized ETL

- Java event rewrite
- Multiple pipelines



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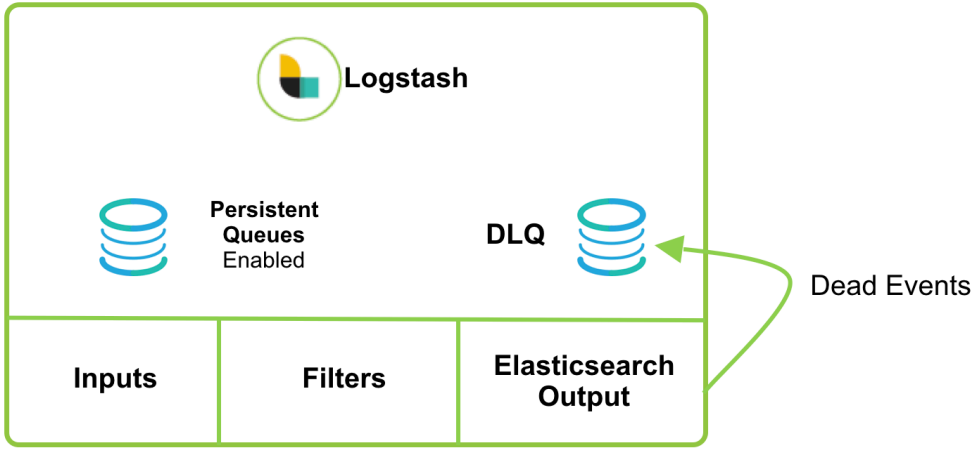
Ingestion Architecture

Scalable and robust centralized ETL

- Persistent queues
- Dead letter queues



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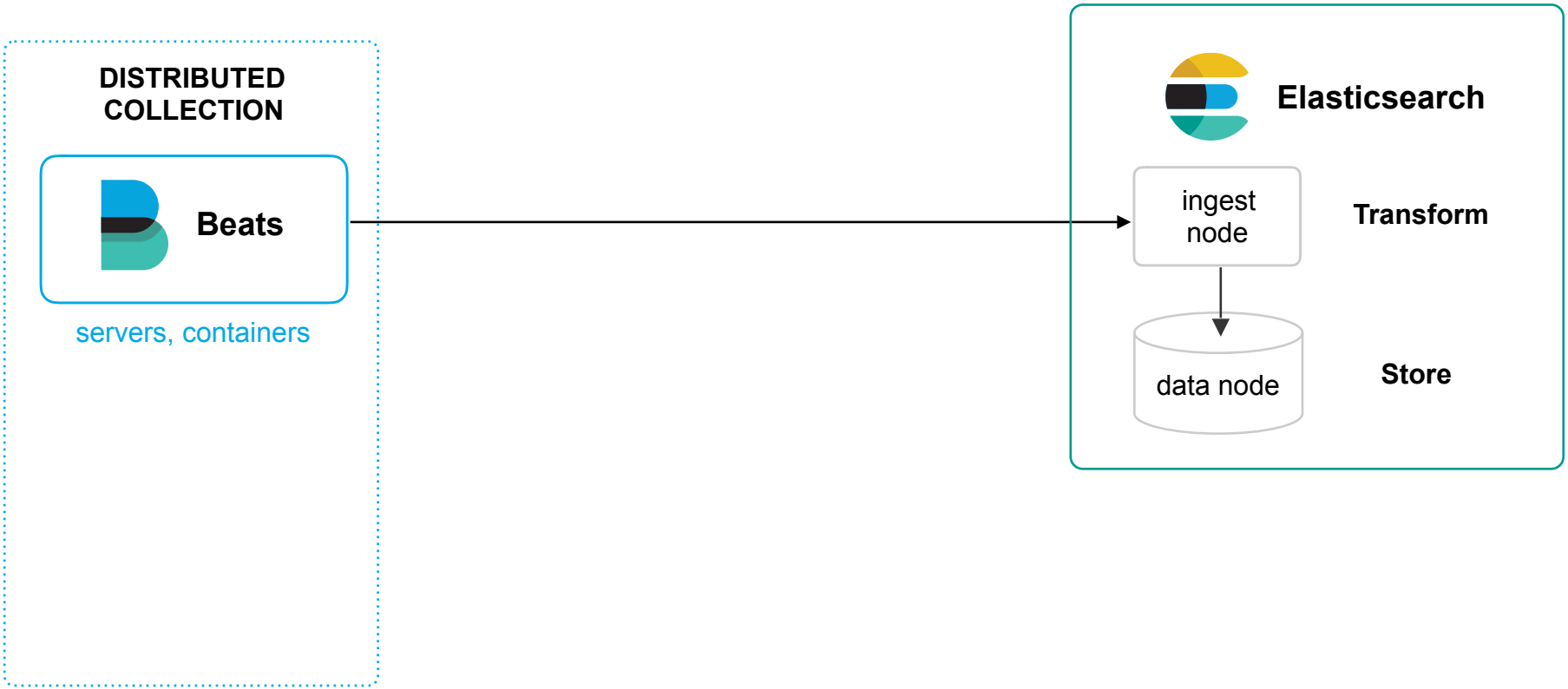
Cooperative Ingestion



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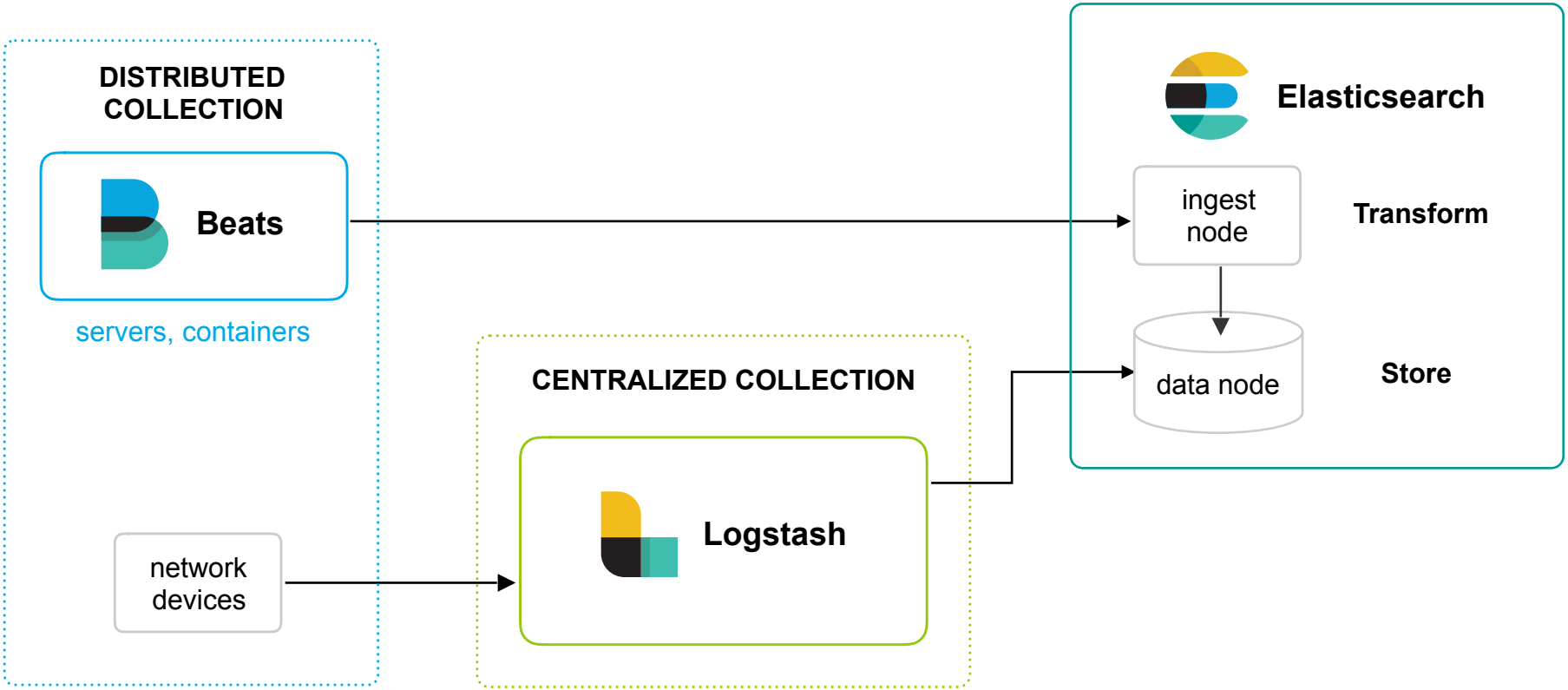
Elastic Ingestion Technologies



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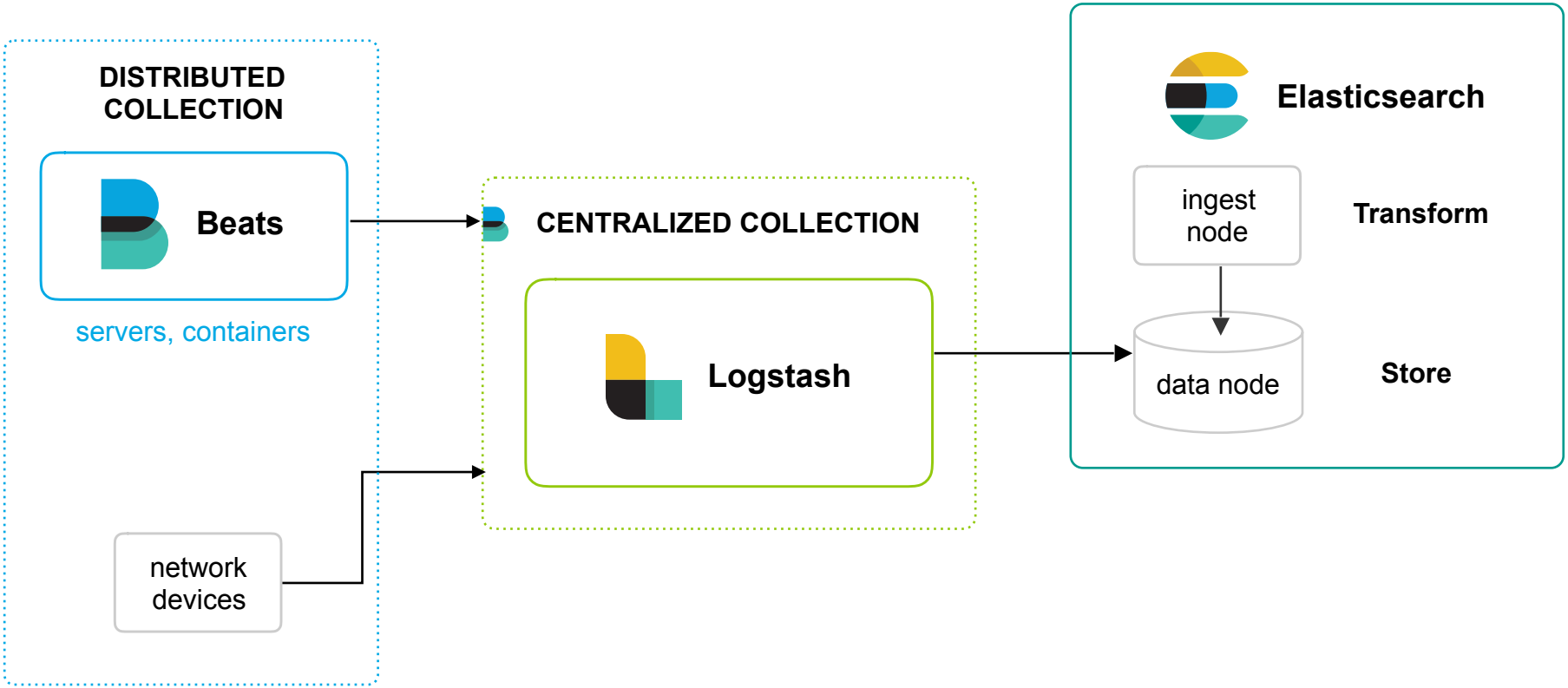
Elastic Ingestion Technologies



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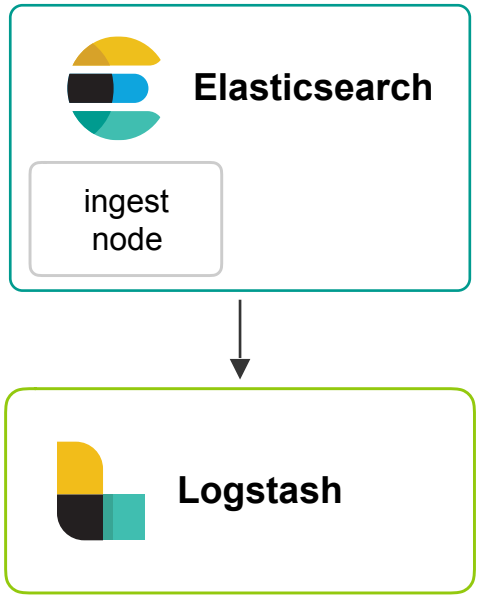
Easy migration between ingest technologies

Ingest Node to Logstash conversion tool




```
$ bin/ingest-convert.sh --input=file:///tmp/ingest-nginx.json --output=file:///tmp/logstash-nginx.conf
$ cat /tmp/logstash-nginx.conf
filter {
   grok {
      match => {
         "request" => "%{WORD:request_action} %{DATA:request1} HTTP/%{NUMBER:http_version}"
      }
   }

   geoip {
      source => "remote_ip"
      target => "geoip"
   }
   date {
      match => [
         "time",
         "dd/MMM/YYYY:HH:mm:ss Z"
      ]
      target => "@timestamp"
      locale => "ENGLISH"
   }
}
output {
   elasticsearch {
      hosts => "localhost"
   }
}
$
```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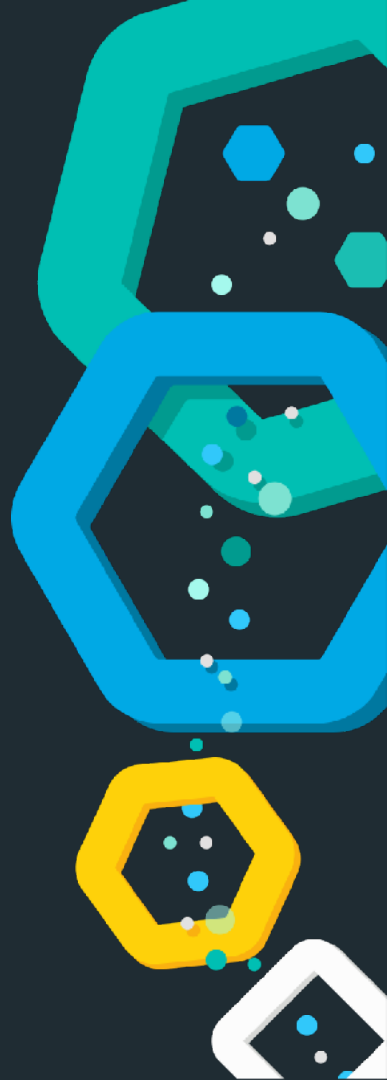
Use Cases & Data Sources



Use Cases & Data Sources

Logging

Common Log Formats

System
Web Servers
Queues

Metrics

Turnkey Monitoring

Infrastructure
Containers
Databases

Security

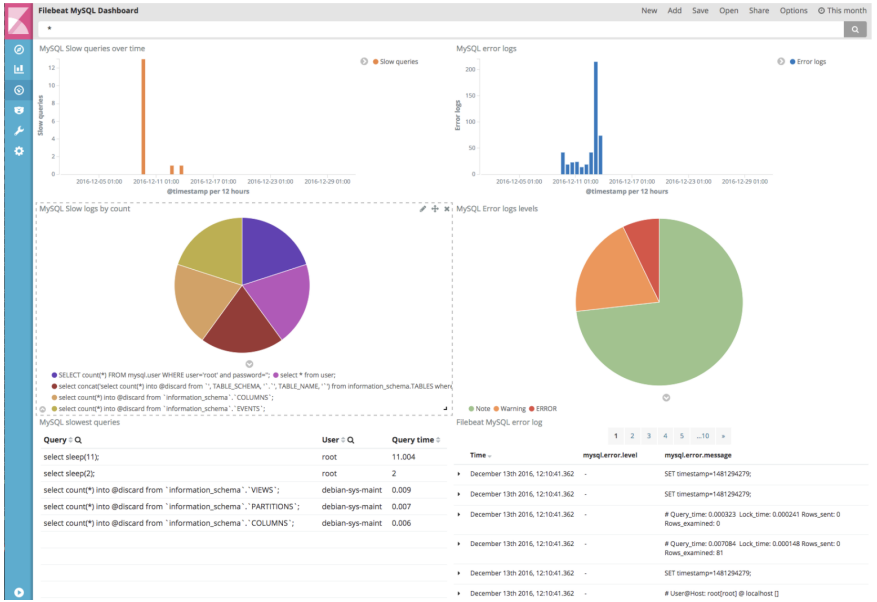
SecOps Dashboards

Audit
Firewalls, IDS/IPS
SIEM Augmentation

Modules: Data sources made easy

- Collect specific type of data
- Parse and enrich it
- Default dashboards, alerts, ML jobs

./filebeat -e -modules=system -setup



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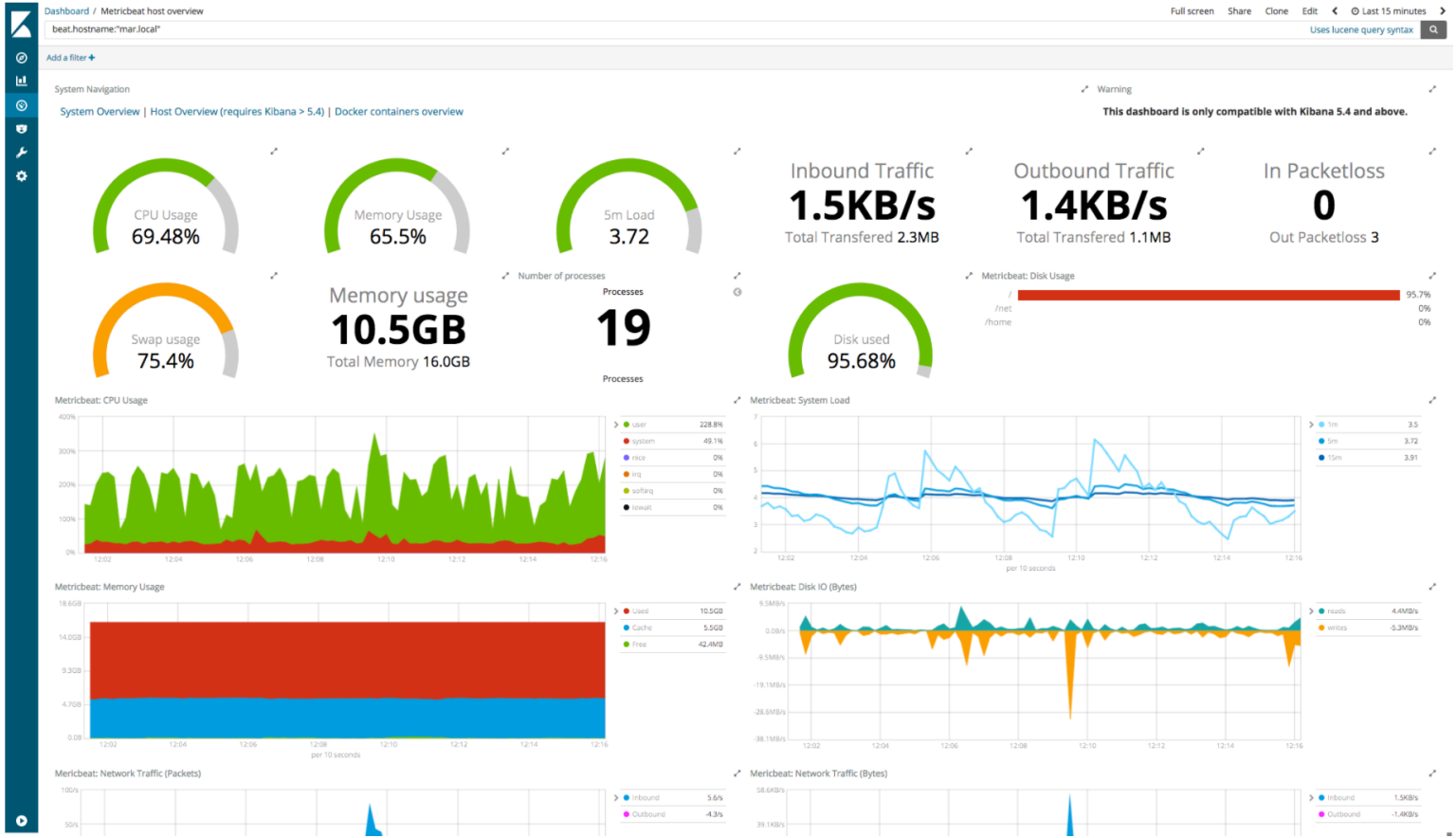
Metricbeat modules (introduced in 5.0)



Aerospike
Apache
Ceph
Couchbase
Docker
Dropwizard
Elasticsearch
Golang
Graphite
HAProxy
HTTP
Jolokia
Kafka
Kibana
Kubernetes
Memcached
MongoDB
MySQL
Nginx
PHP_FPM
PostgreSQL
Prometheus
RabbitMQ
Redis
System
vSphere
Windows
ZooKeeper

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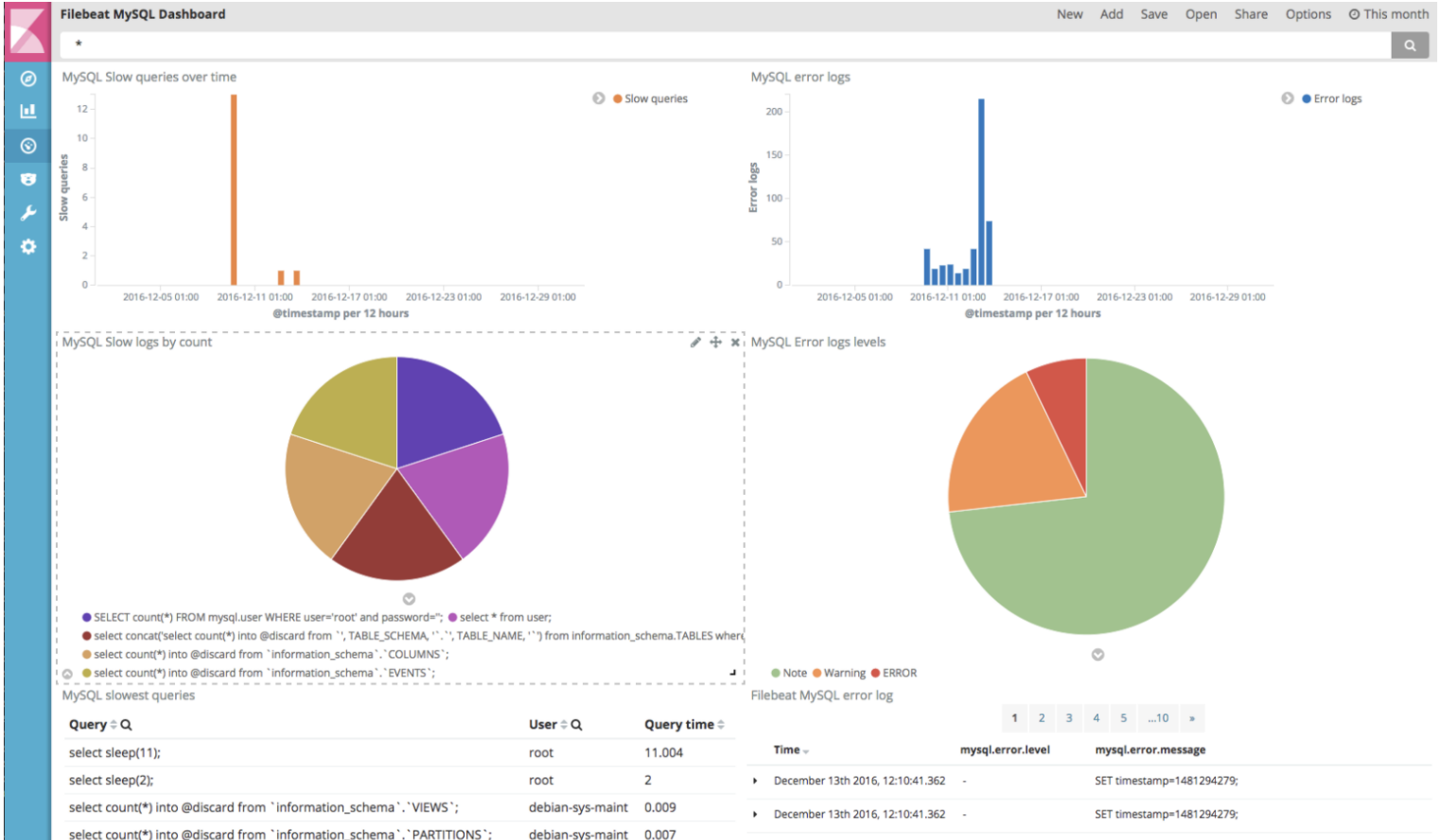
Filebeat modules (introduced in 5.3)



Apache2
Auditd
Icinga
Kafka
MySQL
Nginx
PostgreSQL
Redis
System

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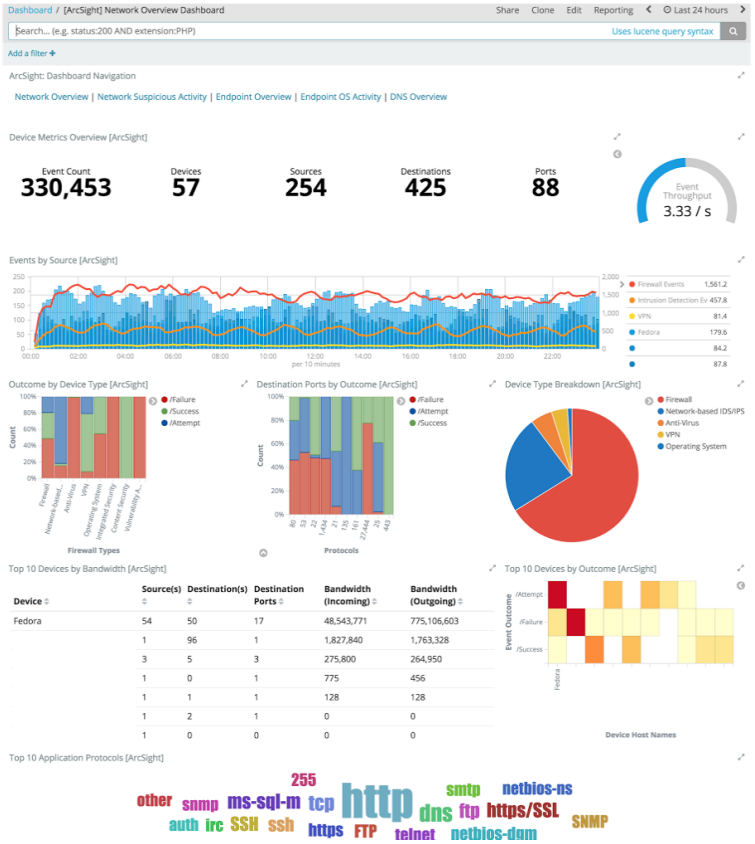
Logstash modules (introduced in 5.6)



ArcSight Netflow

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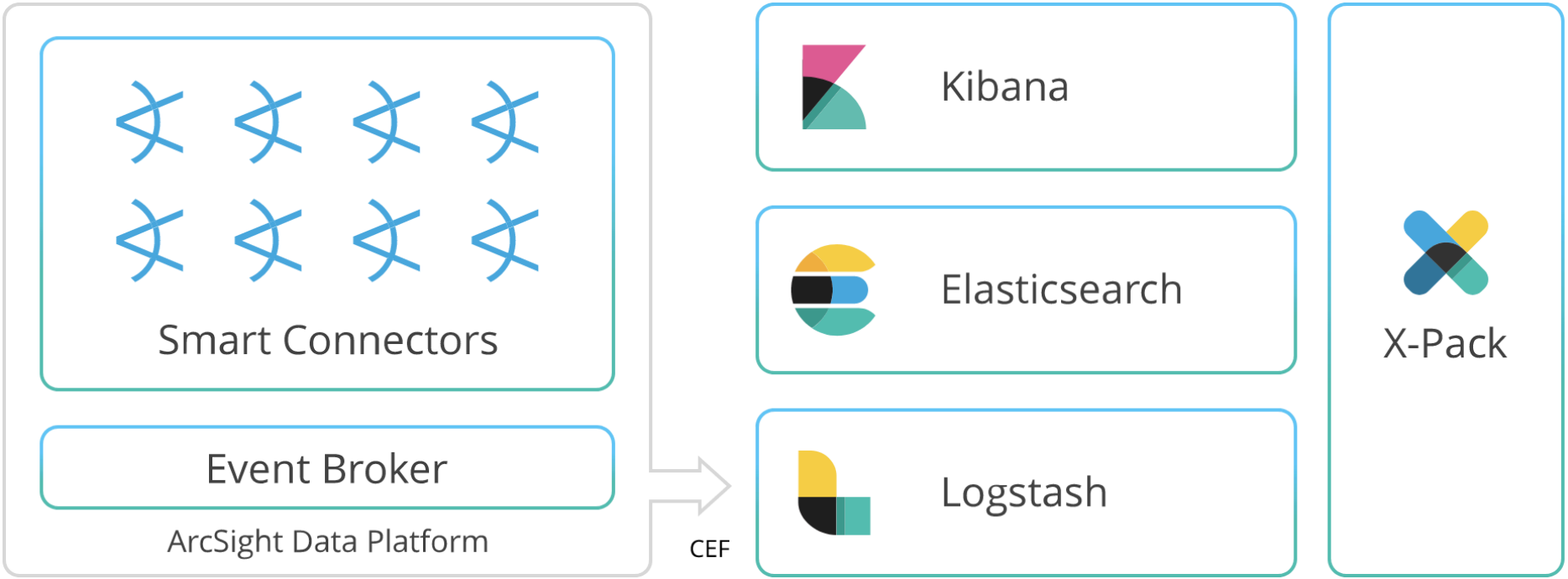
ArcSight Module (Introduced in 5.6)



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DEMO

Logging Data Sources

FILEBEAT

WINLOGBEAT

Infrastructure

System

- Linux / MacOS
- Windows Events

Containers

- Docker (6.0)
- Kubernetes (6.0)

Applications

Databases

- MySQL
- PostgreSQL (6.1)

Queues

- Kafka (6.1)
- Redis (6.0)

Web servers

- Apache
- Nginx

Other

- HAProxy*
- Zookeeper*

** Near-term roadmap*

Metrics & Event Data

Infrastructure

System
- Linux
- MacOS
- Windows
- Perfmon (6.0)
- WMI*

Containers
- Docker
- Kubernetes (6.0)

Virtualization
- vSphere (6.0)

Cloud
- AWS
- GCP
- Azure*
- DigitalOcean
- ….

Network
- Netflow (5.6)
- Packets

Storage
- Ceph

** Near-term roadmap*

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Metrics & Event Data

METRICBEAT HEARTBEAT LOGSTASH



Applications

Datastores
- MySQL
- PostgreSQL
- MongoDB
- Couchbase
- Aerospike (6.0)
- Graphite (6.1)

Queues
- Kafka
- Redis
- RabbitMQ (6.0)

Caches
- Memcached (6.0)

Uptime
- Heartbeat

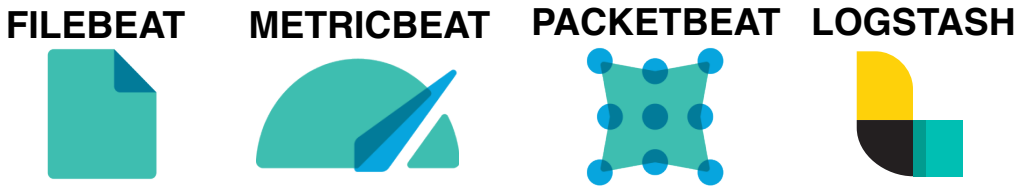
Custom apps
- JMX/Jolokia
- PHP-FPM
- Golang (6.0)
- Dropwizard (6.0)

Web servers
- Apache
- Nginx

Other
- HAProxy
- Zookeeper
- Prometheus

** Near-term roadmap*

Security Data Sources



Security

SIEM Augmentation

- ArcSight (5.6)
- more*

Audit

- Auditd
- Auditbeat (6.0)

Activity

Systems

- Access
- SSH

Applications

- Connections
- Users

Network

- IPs / GeoIP
- DNS Packets
- Netflow (5.6)
- Firewalls*
- IDS/IPS*

** Near-term roadmap*

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Business Analytics

LOGSTASH

Structured

Databases

- JDBC input
- JDBC filter

Activity

SaaS services

- Salesforce
- Heroku
- Github
- Azure*

Social media

- Twitter

** Near-term roadmap*

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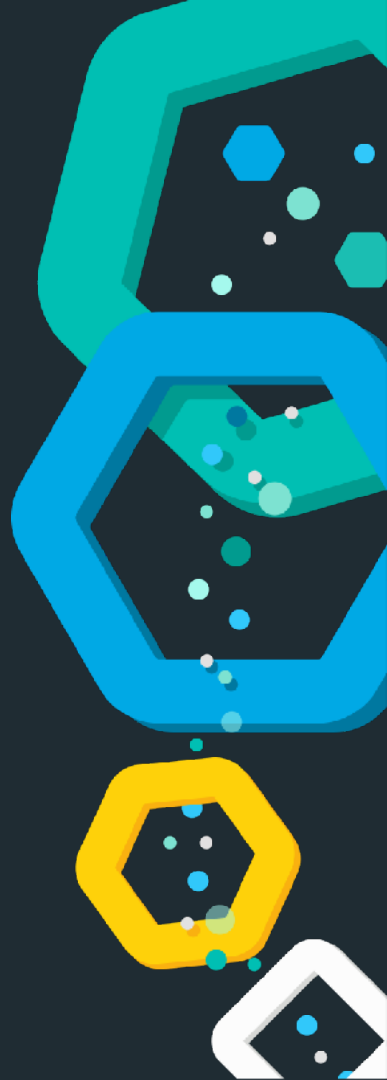
Administration

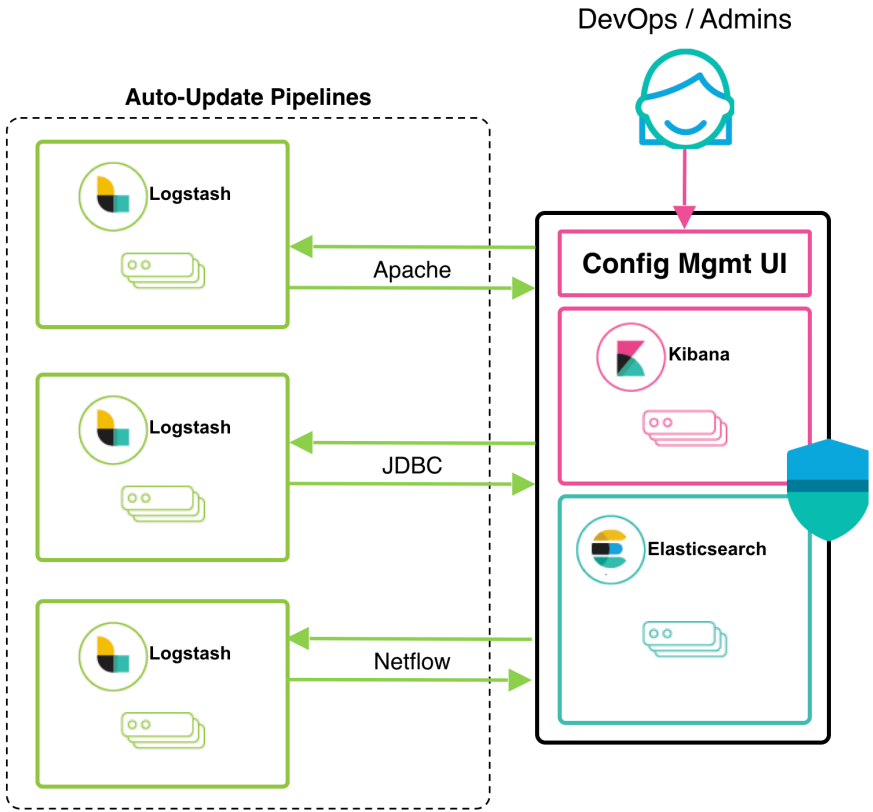


Monitoring & Management

Logstash

- Centralized monitoring (5.3)
- Centralized management (6.0)

** Near-term roadmap*



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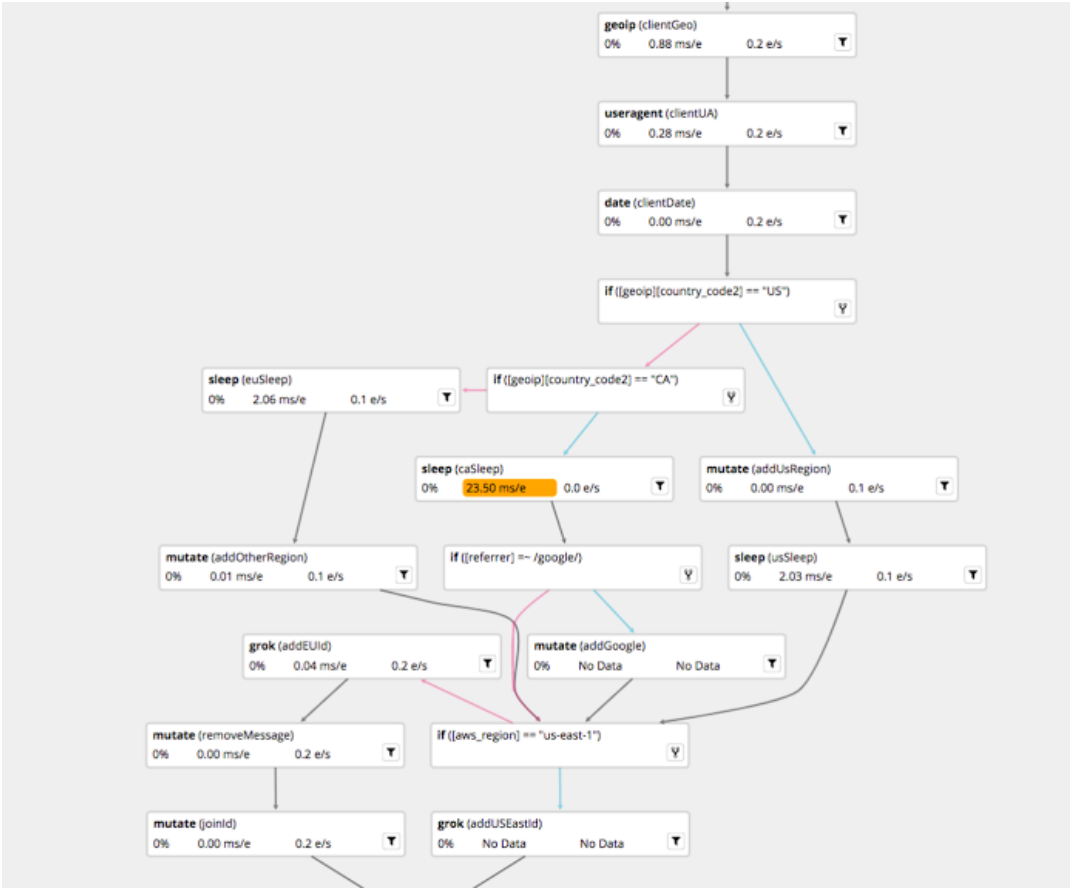
Logstash Monitoring



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Monitoring & Management

Logstash

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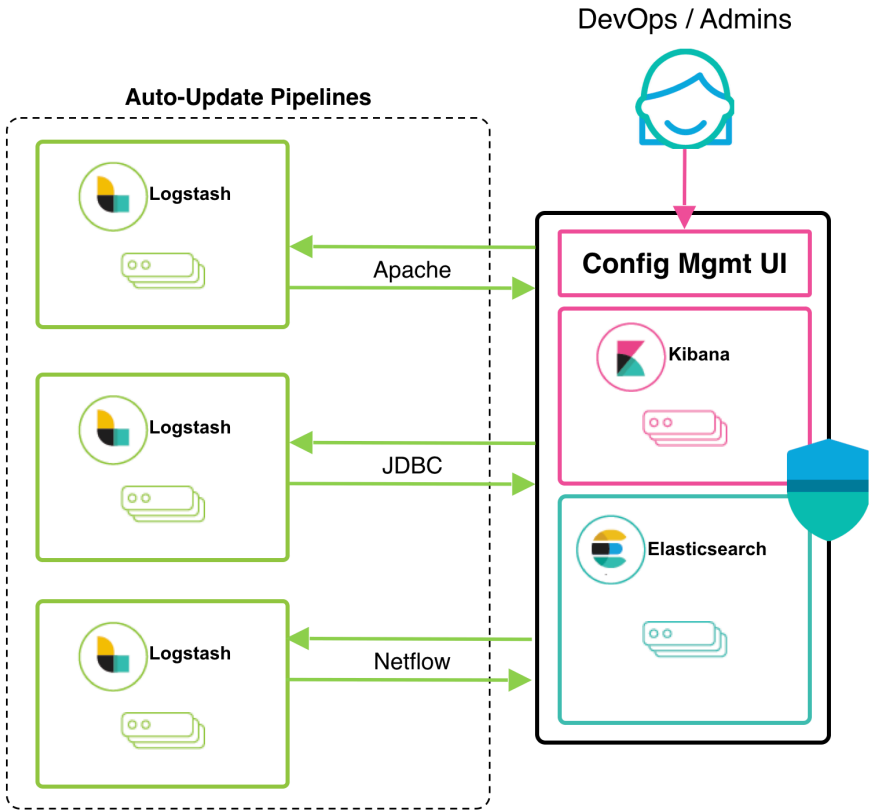
** Near-term roadmap*



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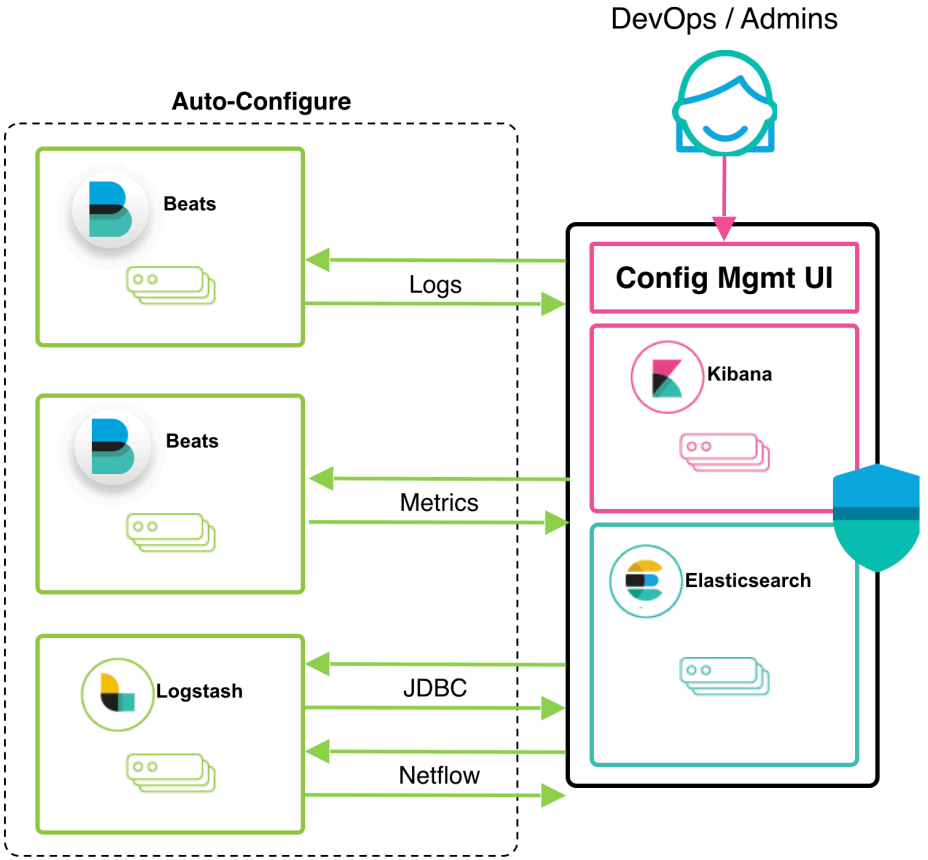
Monitoring & Management

Logstash

- Centralized monitoring (5.3)
- Centralized management (6.0)

Beats (Roadmap)

- Centralized monitoring
- Centralized management



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Next steps

- Familiarize yourself with latest integrations (including in X-Pack)
- Watch UI roadmap for additional add-data workflows
- Come talk to us at the AMA booth

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Thank You

Find me at AMA booth or email david@elastic.co