

## 1. Elasticsearch-Filebeat-Kibana stack to monitor Nginx logs

### Solution:

**Step 1:** elk-nginx-monitoring  
cd elk-nginx-monitoring  
nano docker-compose.yml

version: '3.7'

services:

nginx:

image: nginx:latest

container\_name: nginx

volumes:

- ./nginx/nginx.conf:/etc/nginx/nginx.conf
- ./nginx/log:/var/log/nginx

ports:

- "80:80"

networks:

- elk

elasticsearch:

image: docker.elastic.co/elasticsearch/elasticsearch:8.10.0

container\_name: elasticsearch

environment:

- discovery.type=single-node
- xpack.security.enabled=false

ports:

- "9200:9200"

networks:

- elk

kibana:

image: docker.elastic.co/kibana/kibana:8.9.0

container\_name: kibana

environment:

- ELASTICSEARCH\_HOSTS=http://elasticsearch:9200
- 

ELASTICSEARCH\_SERVICE\_TOKEN=AAEAAWVsYXN0aWMva2liYW5hL2RIZmF1bH  
Q6aG5kdzZubHRTZi1OTkxEcDJnTVdPQQ

ports:  
- "5601:5601"

networks:  
- elk

filebeat:  
image: docker.elastic.co/beats/filebeat:8.10.0  
container\_name: filebeat  
user: root  
volumes:  
- ./filebeat/filebeat.yml:/usr/share/filebeat/filebeat.yml  
- ./nginx/log:/var/log/nginx  
networks:  
- elk  
depends\_on:  
- elasticsearch

volumes:  
esdata:  
driver: local

networks:  
elk:  
driver: bridge

Step 2: mkdir filebeat  
cd filebeat  
nano filebeat.yml  
-----filebeat.inputs:  
- type: log  
paths:  
- /var/log/nginx/access.log  
- /var/log/nginx/error.log  
fields:  
log\_type: nginx  
fields\_under\_root: true

output.elasticsearch:

```
hosts: ["http://elasticsearch:9200"]
username: "elastic"
password: "changeme"
```

```
setup.kibana:
  host: "kibana:5601"
```

Step 3: touch nginx/nginx.conf

```
---events {
  worker_connections 1024;
}

http {
  server {
    listen 80;

    location / {
      root /usr/share/nginx/html;
      index index.html;
    }

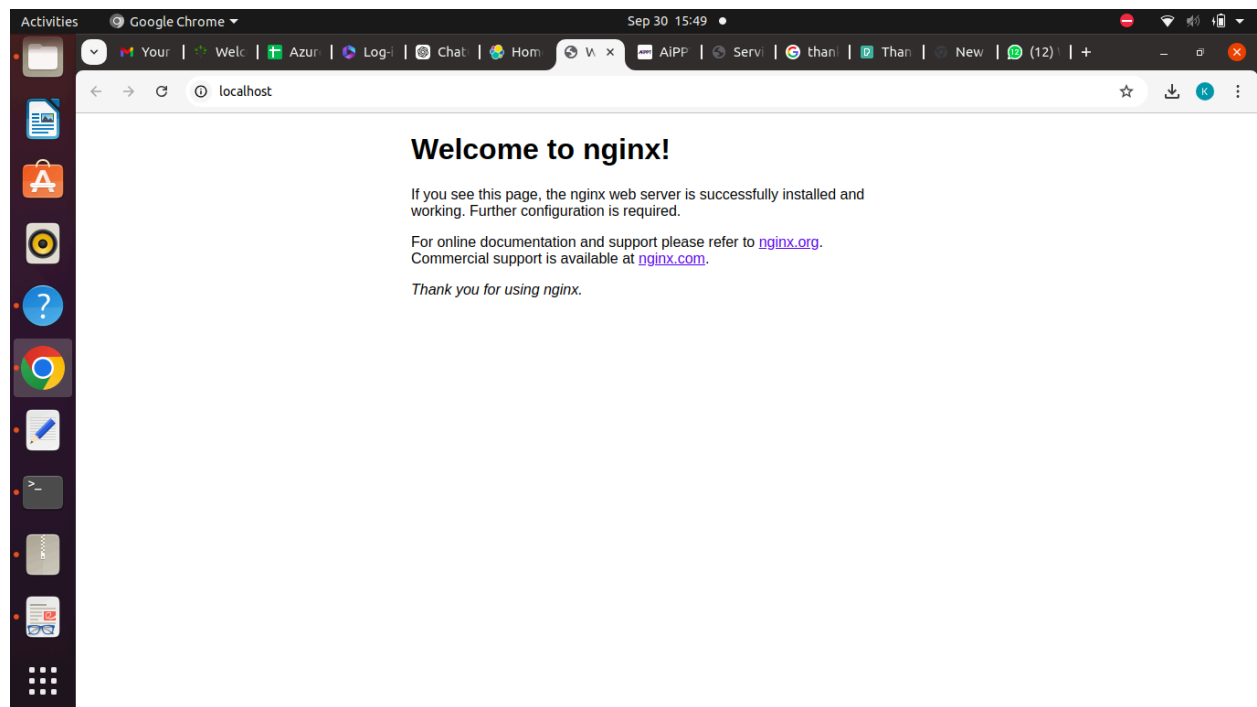
    access_log /var/log/nginx/access.log;
    error_log /var/log/nginx/error.log;
  }
}
```

Step 4: run the command  
**docker-compose up -d**

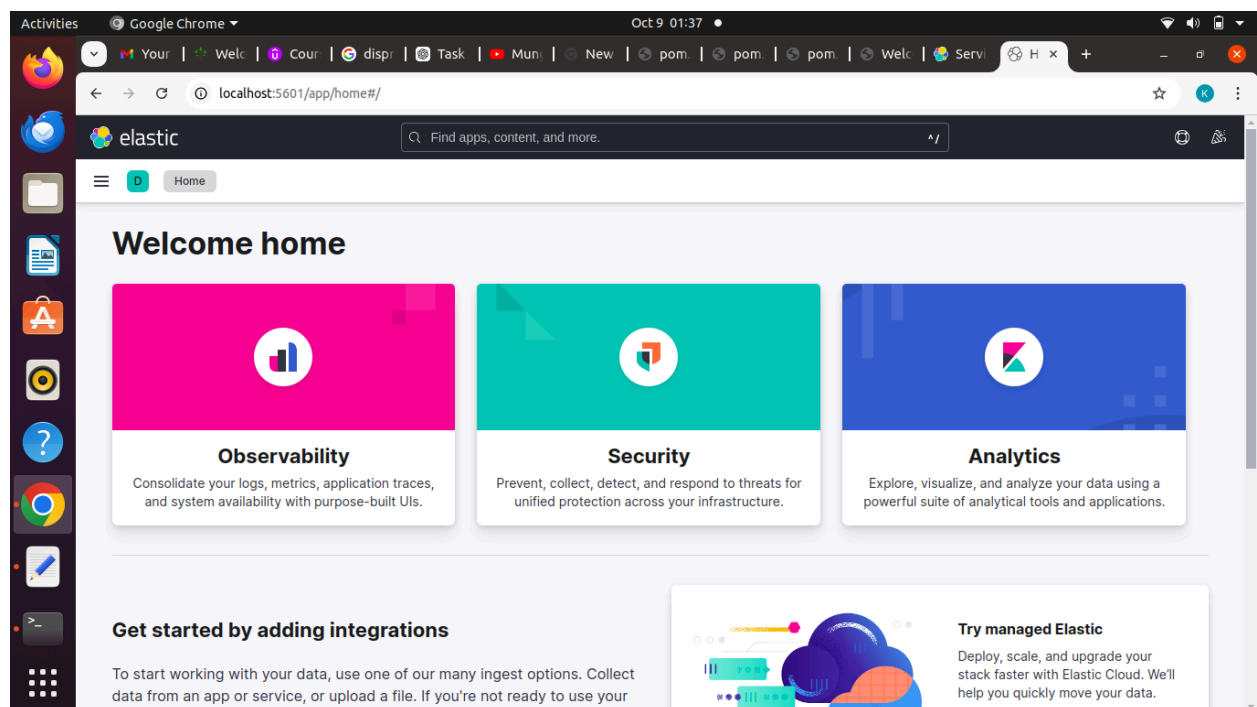
**Output:**

```
Starting elasticsearch ... done
Starting kibana      ... done
Starting nginx       ... done
Starting filebeat    ... done
```

http://localhost



<http://localhost:5601>



# Kibana logs

