Bipin Kumar

Shael.dhn88@gmail.com

ELK Stack

ELK Setup Doc

#### Elasticsearch

* Download latest version of Elasticsearch from this [download page](https://www.elastic.co/downloads/elasticsearch) and unzip it any folder.
* Run bin\elasticsearch.bat from command prompt.
* By default, it would start at <http://localhost:9200>

#### Kibana

* Download the latest distribution from [download page](https://artifacts.elastic.co/downloads/kibana/) and unzip into any folder.
* Open config/kibana.yml in an editor and set elasticsearch.url to point at your Elasticsearch instance. In our case as we will use the local instance just uncomment elasticsearch.url: "http://localhost:9200"
* Run bin\kibana.bat from command prompt.
* Once started successfully, Kibana will start on default port 5601 and Kibana UI will be available at <http://localhost:5601>
* To create pattern in 7.\* version open kibana go to management🡪 stack management -> inside kibana click on index pattern -> click on create pattern button -> define pattern and click on next🡪 choose timestamp then click on finish

#### Logstash

* Download the latest distribution from [download page](https://www.elastic.co/downloads/logstash) and unzip into any folder.
* Create one file logstash.conf with following content in bin director

input

{ tcp {

port => 5000 codec => "json"

}

}

output {

elasticsearch {

hosts=> ["localhost"]

index => "micro-%{serviceName}"

}

}

**Now run bin/logstash -f logstash.conf to start logstash**

**Emitting logs from application:**

* 1. Create a microservice cargo-booking and open its pom.xml and add below dependency.

<dependency>

<groupId>net.logstash.logback</groupId>

<artifactId>logstash-logback-encoder</artifactId>

<version>4.9</version>

</dependency>

<dependency>

<groupId>ch.qos.logback</groupId>

<artifactId>logback-classic</artifactId>

<version>1.2.3</version>

</dependency>

<dependency>

<groupId>ch.qos.logback</groupId>

<artifactId>logback-core</artifactId>

<version>1.2.3</version>

</dependency>

* 1. By default, spring boot uses logback for logging. So, add logback.xml in resource folder with below contain.

<?xml version=*"1.0"* encoding=*"UTF-8"*?>

<configuration>

<appender name=*"STDOUT"* class=*"ch.qos.logback.core.ConsoleAppender"*>

<encoder>

<pattern>%d{HH:mm:ss.SSS} [%thread, %X{X-B3-TraceId:-},%X{X-B3-SpanId:-}] %-5level %logger{36} - %msg%n</pattern>

</encoder>

</appender>

<appender name=*"STASH"*

class=*"net.logstash.logback.appender.LogstashTcpSocketAppender"*>

<destination>localhost:5000</destination>

<encoder

class=*"net.logstash.logback.encoder.LoggingEventCompositeJsonEncoder"*>

<providers>

<mdc /> <!-- MDC variables on the Thread will be written as JSON fields -->

<context /> <!--Outputs entries from logback's context -->

<version /> <!-- Logstash json format version, the @version field in the output -->

<logLevel />

<loggerName />

<pattern>

<pattern>

{

"serviceName": "booking-service"

}

</pattern>

</pattern>

<threadName />

<message />

<logstashMarkers />

<stackTrace />

</providers>

</encoder>

</appender>

<root level=*"info"*>

<appender-ref ref=*"STDOUT"* />

<appender-ref ref=*"STASH"* />

</root>

</configuration>

* 1. Now start eureka and cargo-booking service and open swagger-ui.xml

{

"bookingAmount": 100,

"originLocation": "BLR",

"destLocation" : "DEL",

"destArrivalDeadline" : "2020-01-28"

}

* 1. Now go to kiban UI and click on discover menu and select micro-\* pattern you can now see the logs there.