Online Grok Pattern Generator / Debugger Tool

Enter a VIN

Grok is a term coined by American writer Robert A. Heinlein for his 1961 science fiction novel Stranger in a Strange Land.
When using the ELK stack we are ingesting the data to elasticsearch, the data is initially unstructured. We first need to break the data into structured format and then ingest it to elasticsearch. Such data can then be later used for analysis. This data manipualation of unstructured data to structured is done by Logstash. Logstash itself makes use of grok

Ten
Reset
Just in

consumption. Logstash ships with about 120 patterns by default.

GROK

Enter the log -

```
{"level":"info","message":"User n@gmail.com: created a post.","timestamp":"2023-05-15 12:50:52"}
```

Log data which is to be structured using grok pattern. Example - **2016-07-11T23:56:42.000+00:00 INFO [com.javainuse]:Transaction with transactionid-10 took 10 ms**

Enter the grok pattern -

```
\{%{QUOTEDSTRING:level_label}:%{QUOTEDSTRING:loglevel},\"message\":\"User %{GREEDYDATA:user_email}: %{GREEDYDATA:action}\.\",%{QUOTEDSTRING:timestamp_label}:%{QUOTEDSTRING:timestamp}\}
```

The syntax for a grok pattern is %{SYNTAX:SEMANTIC} The SYNTAX is the name of the pattern that will match your text. The SEMANTIC is the identifier given to a matched text. Example - **%{TIMESTAMP_ISO8601:timestamp}**

Test Grok

```
{
  "timestamp_label": "timestamp",
  "action": "created a post",
  "user_email": "n@gmail.com",
  "level_label": "level",
  "loglevel": "info",
  "timestamp": "2023-05-15 12:50:52"
}
```

Commonly used Logstash Grok Pattern Examples

- Example 1

  Use of grok sematic - NUMBER and IP

  Application Log -

  ```
  64.3.89.2 took 300 ms
  ```

  Grok Pattern -

  ```
  filter {
   grok { match => { "message" => "%{IP:client} took %{NUMBER:duration}" }
   }
  }
  ```

  Output -

  ```
  {
    "duration": "300",
    "client": "64.3.89.2"
  }
  ```

- Example 2

  Use of grok sematic - TIMESTAMP,LOGLEVEL,DATA and GREEDYDATA

  Application Log -

```
2020-03-11T17:23:34.000+00:00 WARNING [App.DataService]:Transaction failed fo
```

Grok Pattern -

```
filter {
 grok { match => { "message" => "%{TIMESTAMP_ISO8601:timestamp} %{LOGLEVEL:lo
 }
}
```

Output -

```
{
  "YEAR": "2020",
  "MONTHNUM": "03",
  "HOUR": [
    "17",
    "00"
  ],
  "log-level": "WARNING",
  "MINUTE": [
    "23",
    "00"
  ],
  "SECOND": "34.000",
  "message": "Transaction failed for transaction id -4jsdf94jsdf29msdf92",
  "ISO8601_TIMEZONE": "+00:00",
  "MONTHDAY": "11",
  "issuer": "App.DataService",
  "timestamp": "2020-03-11T17:23:34.000+00:00"
}
```

- Example 3

Grok fields are strings by default. Numeric fields (int and float) can be declared in the pattern

Application Log -

```
Transaction id 567
```

Grok Pattern -

```
filter {
 grok { match => { "message" => "%{TIMESTAMP_ISO8601:timestamp} Transaction i
 }
}
```

Output -

```
{"transactionid": 567}
```

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