Documentation – Summer Internship 2018

Prometheus

Open source monitoring system with a time series database.

Installation:

Prometheus (and alertmanager) can be downloaded from https://prometheus.io/download/ and then unzipped into any folder. The executable to run the server is provided inside. When the server is running, Prometheus should be accessible from <http://localhost:9090>

Configuration:

All configurations of Prometheus must be done in prometheus.yml file.

Scraping ports are configured under “scrape\_configs” section. “job\_name” is the label added in the time series, “metric\_path” is the path from where metrics will be scraped (default ‘/metrics’) and “targets” is the hostname:port for that path. Health status of the targets can be seen in the Prometheus UI under status/targets.

Configuration of alertmanager for sending alerts is done under “alerting” section. Rules for alerts are configured in separate yml (ex. first\_rule.yml) files. Inside these files the alert name, expressions and duration for which the rule would be true, alert summary etc are configured.

Files where rules are written are specified under the “rule\_files” section of prometheus.yml.

Receivers of the alerts(email/slack etc), repeat interval and other configurations are done inside alertmanager.yml file.

References:

<https://prometheus.io/docs/prometheus/latest/getting_started/>

<https://prometheus.io/docs/alerting/alertmanager/>

Grafana

Open source software for time series analytics.

Installation:

Grafana can be downloaded from <https://grafana.com> and extracted to any folder. After running the Grafana server that comes with the downloaded files, Grafana should be accessible from <http://localhost:3000/> (Username: admin Password: admin)

Configuration:

Default configuration of Grafana can be changed by creating a custom.ini file inside conf folder, copying everything from sample.ini into custom.ini and then changing desired attributes (ex: http\_port, domain).

Grafana Dashboards can be created or exported from <https://grafana.com/dashboards>.

References:

<http://docs.grafana.org/guides/getting_started/>

Elasticsearch

Open source search engine and analytics

Installation:

Elasticsearch can be downloaded from <https://www.elastic.co/> and then unzipped into any folder. The executable to run the server is provided inside. It can be checked if it is running successfully from <http://localhost:9200>

Configuration:

Configuration of elasticsearch can be done in elasticsearch.yml file. If plugins are installed ( xpack / searchguard ) then those needs to be configured in the same file.

Full installation and configuration guide for implementing searchguard in elasticsearch and kibana can be found here: <https://docs.search-guard.com/latest/installation-windows>

References:

<https://www.elastic.co/guide/en/elasticsearch/reference/current/getting-started.html>

<https://www.edureka.co/blog/elk-stack-tutorial/>

Kibana

Open source data visualization plugin for Elasticsearch

Installation:

<https://www.elastic.co/products/kibana>

Configuration:

References:

<https://www.elastic.co/guide/en/elasticsearch/reference/current/getting-started.html>

<https://www.edureka.co/blog/elk-stack-tutorial/>

Logstash

Installation:

Configuration:

References:

<https://www.elastic.co/guide/en/elasticsearch/reference/current/getting-started.html>