

Cloud Monitoring Architecture

In Order to build Cloud Monitoring Architecture. We can collect following information's from Source(Jenkins) and store them in a data store for future Analysis.

Tools Proposed for Monitoring:

Grafana

Prometheus

Jenkins Plugins Required for Monitoring:

Jenkins Prometheus Metrics Plugin

Steps Required to Configure Monitoring Solution:

- 1) Install Grafana and Prometheus in a Ec2 Instance with ports 3000(Grafana) and 9100(Prometheus) enabled for group access.
- 2) Once Installed update **prometheus.yml** with below scrape_config to query Jenkins Data

```
scrape_configs:
- job_name: 'jenkins_monitoring'
  metrics_path: /prometheus

static_configs:
- targets: ['jenkinshostname:port']
```

- 3) Install Jenkins Prometheus Metrics Plugin in Jenkins and configure the same like below

Jenkins > configuration

Docker registry URL

Registry credentials

Prometheus

Path

Default Namespace

Enable authentication for prometheus end point

Collecting metrics period in seconds

Count duration of successful builds

Count duration of unstable builds

Count duration of failed builds

Count duration of not built builds

Count duration of aborted builds

Fetch the test results of builds

Ignore disabled jobs

Job attribute name

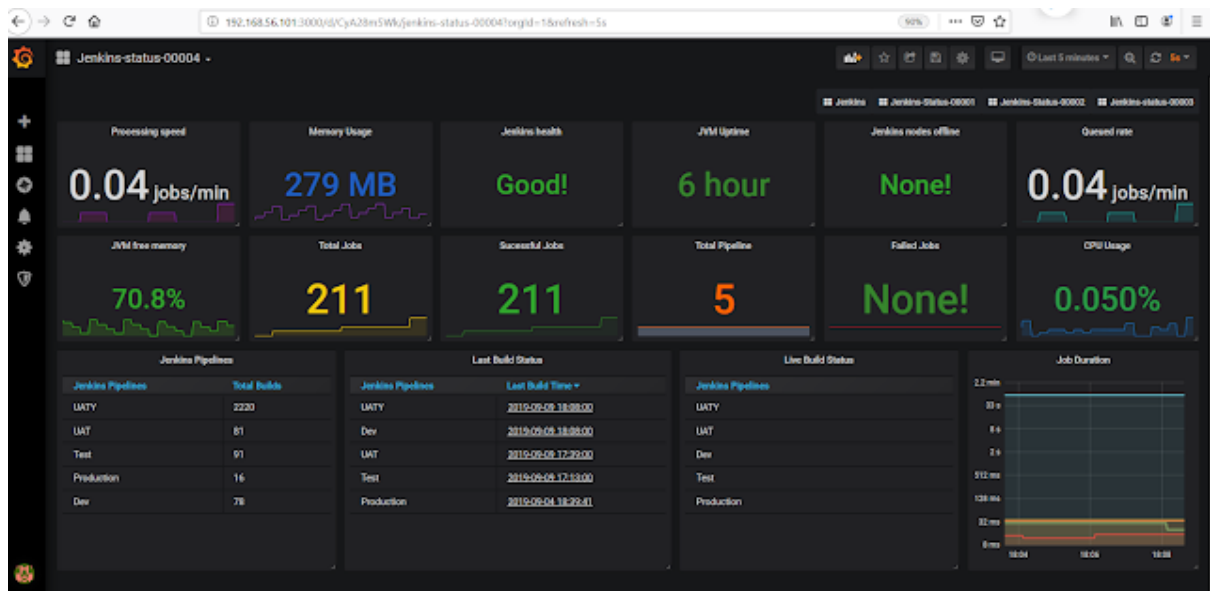
Global Pipeline Libraries

Sharable libraries available to any Pipeline jobs running on this system. These libraries will be trusted, meaning they run without "sandbox" restrictions and may use `file`.

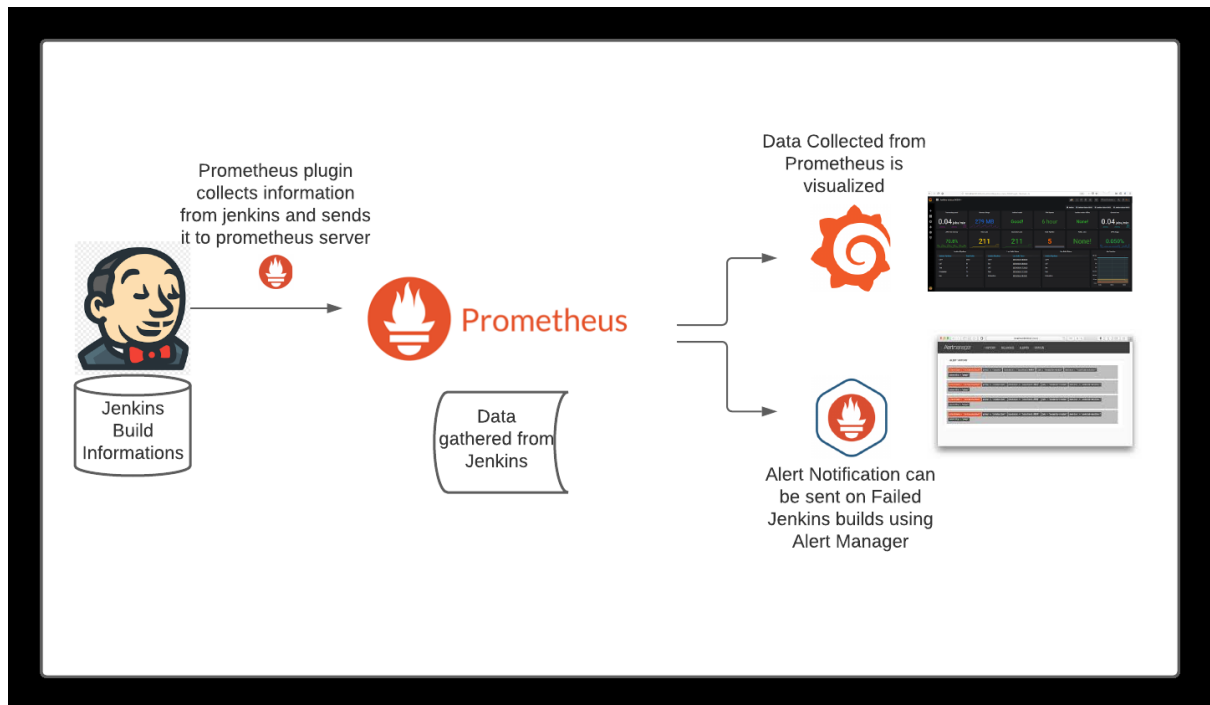
this will push Jenkins build information to Prometheus server

4) Having information's on Jenkins jobs build data we can use Prometheus as a Data Source in Grafana to Visualize them in a needed format.

We can use Visualize data gathered from Prometheus in Grafana like below



Architecture Diagram:



Components in the monitoring solution:

- | Source → Jenkins
- | Data Store → Prometheus
- | Dashboard → Grafana
- | Alerts → Alert Manager