

Prometheus For Application Monitoring



 info@crozaint.com

 www.crozaint.com

 Microsoft | AZURE
PARTNER

 amazon
web services | Partner
Network
CONSULTING PARTNER

 crozaint

Summary

The objective was to create a centralized monitoring set up for one of our US based client who was previously depended on a 3rd party monitoring SaaS tool.

Problem Statement

As mentioned, the client was already depending on a third party tool for monitoring all the application and system related metrics. The count of application metrics were very high and they were already paying a lot of money for the monitoring and alerting purpose. The key points that needs to consider were:

- ◆ Data security
- ◆ Cost effective solution
- ◆ Best solution that support cloud infrastructure

Business Requirements

To create an in-house monitoring tool for both system and application metrics in AWS cloud infrastructure.

Solution

Prometheus was initially developed by a group of engineers in soundcloud in 2012. Today large number of companies are using it as a monitoring tool. The Prometheus server scrapes targets at an interval that you define to collect metrics from specific targets and store them in a *time-series database*.

Infrastructure side

- ◆ The entire monitoring solution was created in AWS cloud. Prometheus server was hosted on an m4.large EC2 instance
- ◆ Automated the backup for Prometheus server with proper retention

Application side

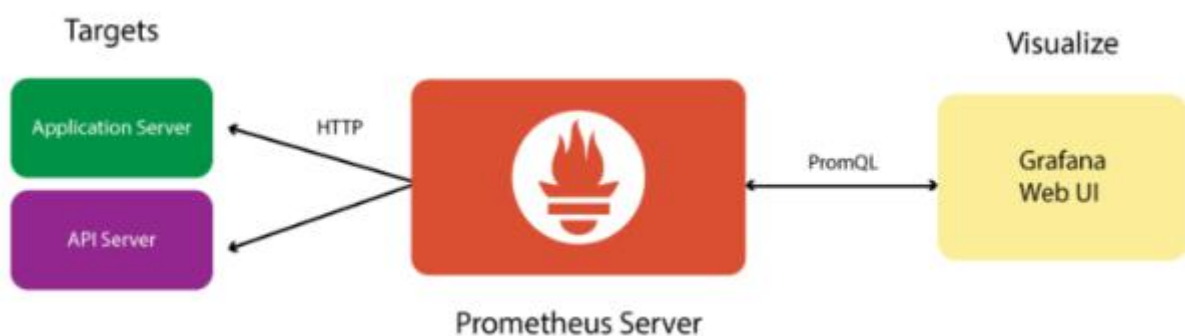
In the application side we have used combination of few tools and services which are noted below:

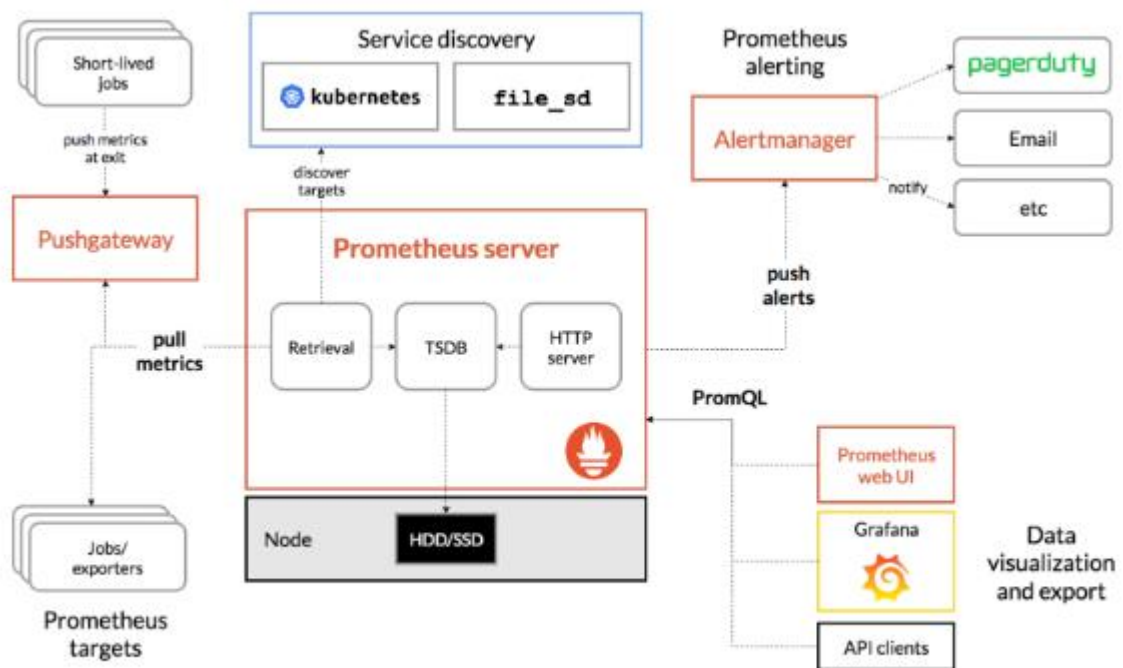
- ◆ Prometheus server
- ◆ Telegraf exporter
- ◆ Client libraries
- ◆ Push gateway
- ◆ special-purpose exporters for services like HAProxy, StatsD, Graphite, etc.
- ◆ Alert manager
- ◆ Grafana

Advantages of Prometheus comparing with legacy systems:

- ◆ Flexible and advanced query language
- ◆ Metrics pull model over HTTP
- ◆ Auto Service - auto detect monitoring targets
- ◆ Prometheus values reliability
- ◆ Supports integration with Email,Pagerduty,Slack etc
- ◆ In addition to Grafana, Prometheus have an In-built dashboard

Architecture Diagram





Business Outcomes

We were able to provide a scalable in-house setup for monitoring and alerting there by making it affordable.

The entire setup was done using automation tools thereby the same application can be replicated in multiple environments without much effort.

Data security was also a problem and our solution ensures that the entire application data safe inside the client own cloud infrastructure