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# Sending Prometheus Alertmanager to Google Chat

Didiet Agus Pambudiono

DevOps Engineer **PT. GITS Indonesia**

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# About Me

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## Didiet Agus Pambudiono

DevOps Engineer PT. GITS Indonesia

gits.id

@didiet_ap

[Didiet A. Pambudiono](#)

pambudiono.os@gmail.com

# Agenda

- Prometheus
- Alertmanager
- Calert
- Q&A

# Backround

# Background

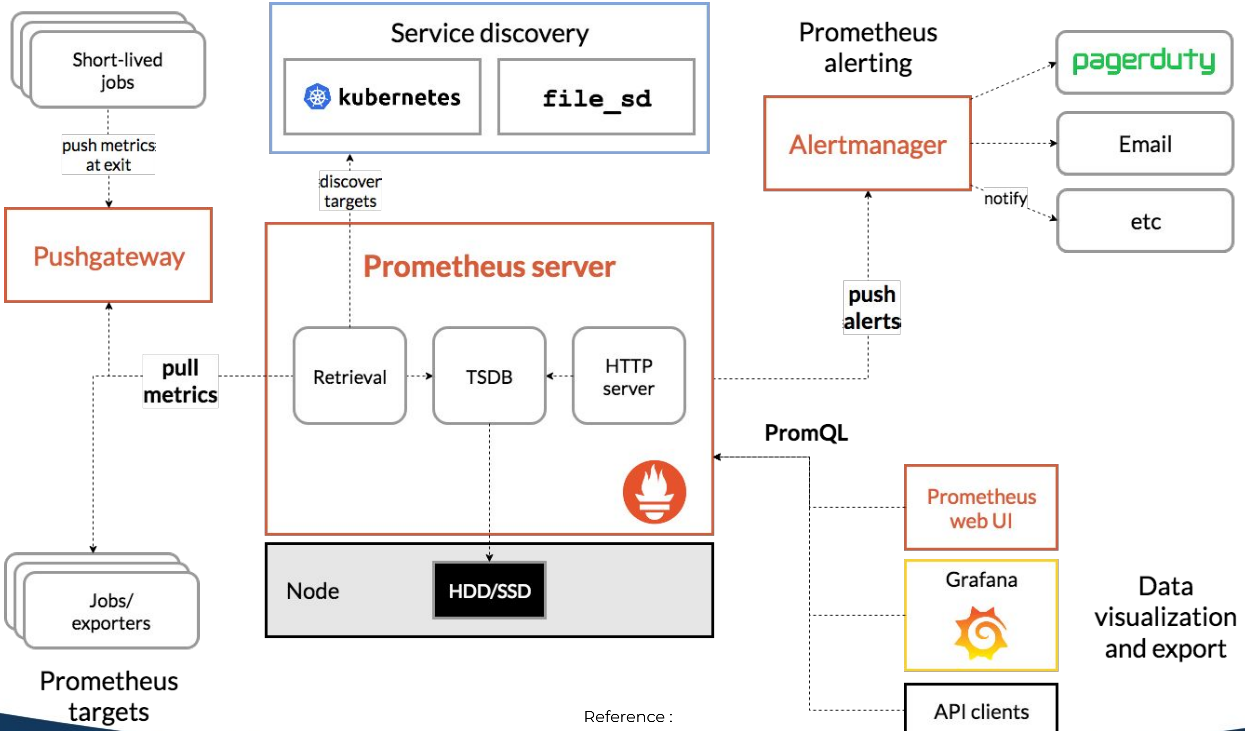
- Extensive use of google chat for communication between engineers.
- Reduce the use of other communication platforms, such as slack etc.
- Internal notification alert if there is an incident.

# Prometheus

# Prometheus

- Open-source systems monitoring and alerting toolkit originally built at SoundCloud.
- Since its inception in 2012, many companies and organizations have adopted Prometheus.
- The project has a very active developer and user community.
- It is now a standalone open source project and maintained independently of any company.
- Prometheus joined the Cloud Native Computing Foundation in 2016 as the second hosted project, after Kubernetes.

# Prometheus Architecture



Reference : https://prometheus.io/docs/introduction/overview/

# Alertmanager

# Alertmanager

The Alertmanager handles alerts sent by client applications such as the Prometheus server. It takes care of deduplicating, grouping, and routing them to the correct receiver integration such as email, PagerDuty, or OpsGenie. It also takes care of silencing and inhibition of alerts.

# Alertmanager

AlertManager manages all alerts through its pipeline of **Silencing**, **grouping**, **inhibition,** and sending out notifications.

- **Silencing -** Silencing is to mute alerts for a given period of time.
- **Grouping -** Grouping groups alerts of similar nature into a single notification. This helps prevent multiple notifications simultaneously to the receivers.
- **Inhibition -** To suppress specific alerts if other alerts are already fired.

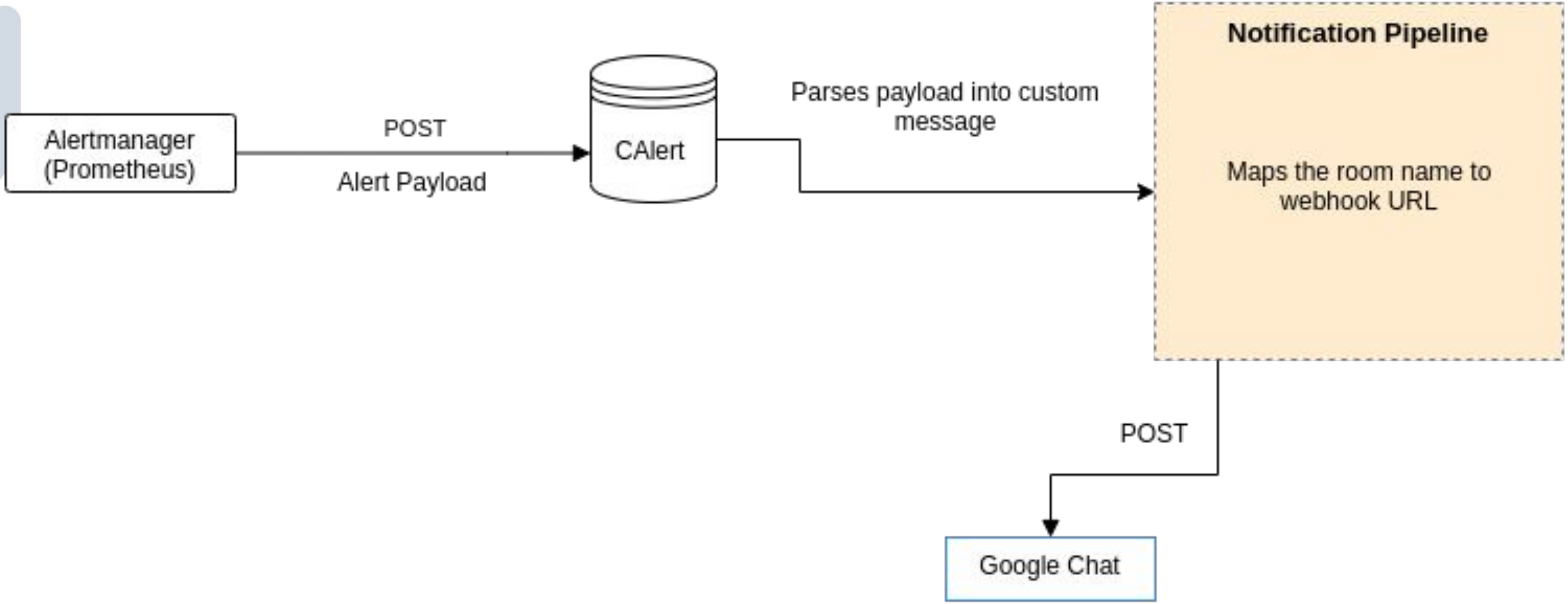
# Calert

# Calert

calert is a lightweight binary to push Alertmanager notifications to Google Chat via webhook integration.

calert uses Alertmanager webhook receiver to receive alerts payload, and pushes this data to Google Chat webhook endpoint

# How it works


Alertmanager (Prometheus)
POST
Alert Payload
CAlert
Parses payload into custom message
Notification Pipeline
Maps the room name to webhook URL
POST
Google Chat

Reference :
https://github.com/mr-karan/calert

# Installation in Linux

- Just download binary file from *Release section*
- And put the calert anywhere, example /opt

# Calert Components

- **Config.toml**
  Configuration file for running calert service
- **Message.tmpl**
  Template messages for sending information to google chat

# Run and Test Calert

- Just run :
  ./calert &
- Test it with curl command :
  Curl http://<ip_address>:6000
- if there is information like below, then the service is running :

```
{"status":"success","message":"Welcome to Alertmanager - GChat
bot API","data":null}
```

# Message Template Config

```
*{{ .Labels.alertname | Title }} - {{.Status | Title }} ({{.Labels.severity | toUpper }})*
{{ range .Annotations.SortedPairs -}}
{{ .Name }}: {{ .Value}}
{{ end -}}
```

# Calert Configuration

```
[server]
address = ":6000"
socket = "/tmp/calert.sock"
name = "calert"

# WARNING If these timeouts are less than 1s,
# the server connection breaks.
read_timeout=5000
write_timeout=5000
keepalive_timeout=300000

[app]
template_file = "message.tmpl"
max_size = 4000

[app.http_client]
max_idle_conns =  100
request_timeout = 8000

[app.chat.alertManagerTestRoom]
notification_url = "https://chat.googleapis.com/v1/spaces/xxx/messages?key=abc-xyz&token=token-unique-key%3D"

[app.chat.awesomeRoomTwo]
notification_url = "https://chat.googleapis.com/v1/spaces/xxx/messages?key=abc-xyz&token=token-unique-key%3D"
```

# Alertmanager Config

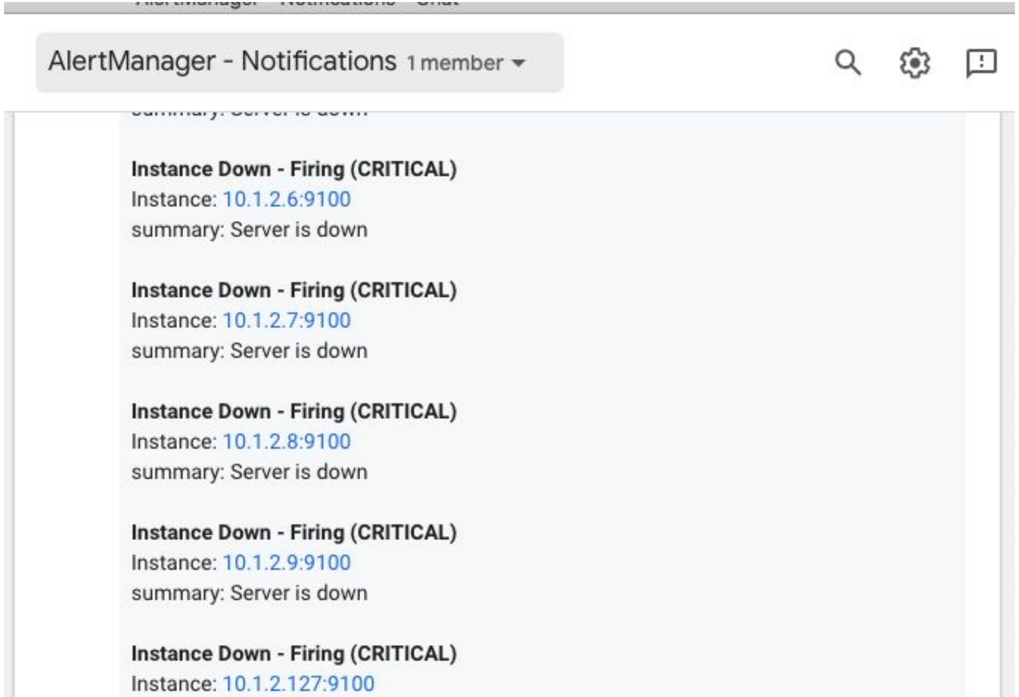
```
global:
  resolve_timeout: 5m

route:
  group_by: ['alertname', 'cluster', 'service']
  group_wait: 10s
  group_interval: 60m
  repeat_interval: 60m
  receiver: 'alertmanager-calert'

receivers:
- name: 'alertmanager-calert'
  webhook_configs:
  - send_resolved: false
    url: 'http://127.0.0.1:6000/create?room_name=alertManagerTestRoom'

inhibit_rules:
  - source_match:
      severity: 'critical'
    target_match:
      severity: 'warning'
    equal: ['alertname', 'dev', 'instance']
```

# G-Chat example



AlertManager - Notifications 1 member

summary: Server is down

**Instance Down - Firing (CRITICAL)**
Instance: 10.1.2.6:9100
summary: Server is down

**Instance Down - Firing (CRITICAL)**
Instance: 10.1.2.7:9100
summary: Server is down

**Instance Down - Firing (CRITICAL)**
Instance: 10.1.2.8:9100
summary: Server is down

**Instance Down - Firing (CRITICAL)**
Instance: 10.1.2.9:9100
summary: Server is down

**Instance Down - Firing (CRITICAL)**
Instance: 10.1.2.127:9100

Reference : https://github.com/mr-karan/calert

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# Thanks!

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youremail@google.com
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