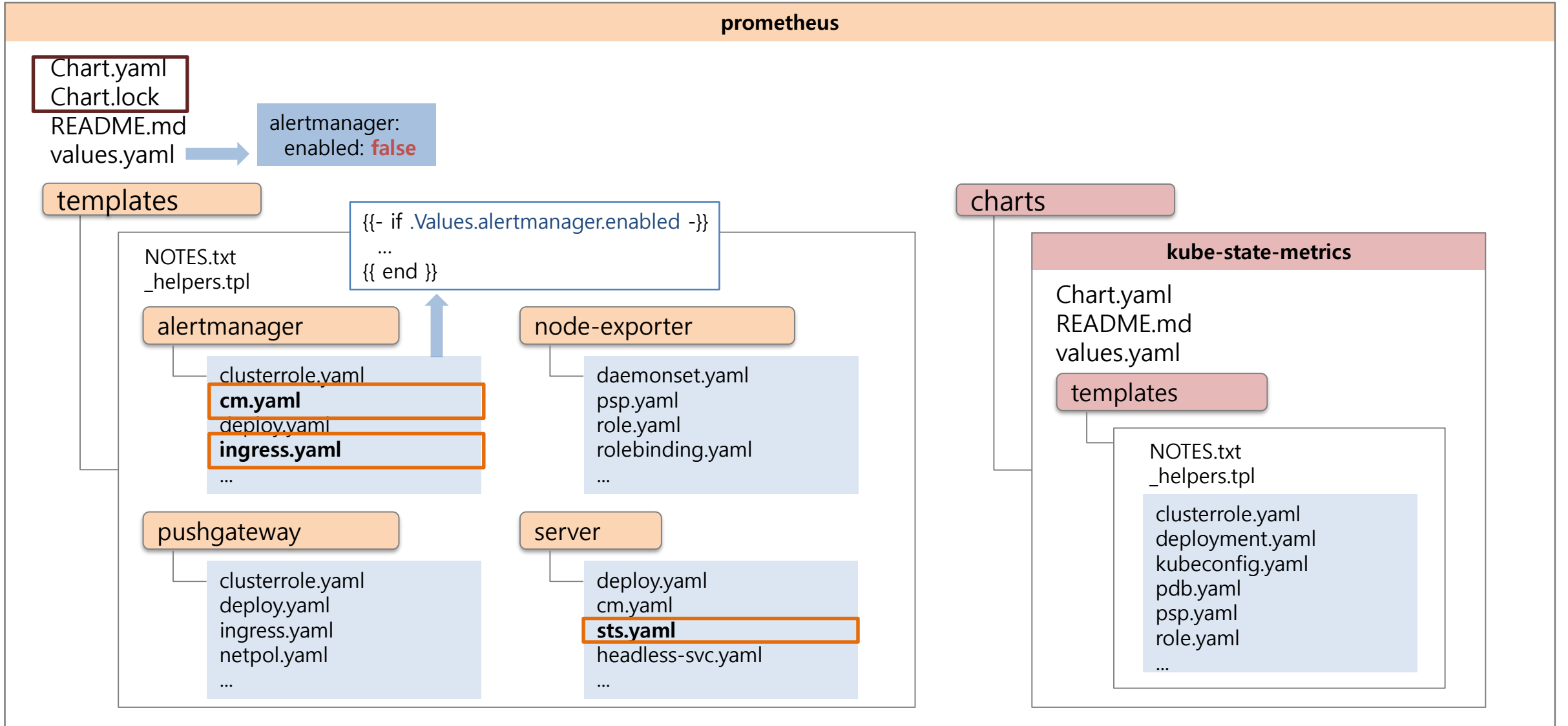


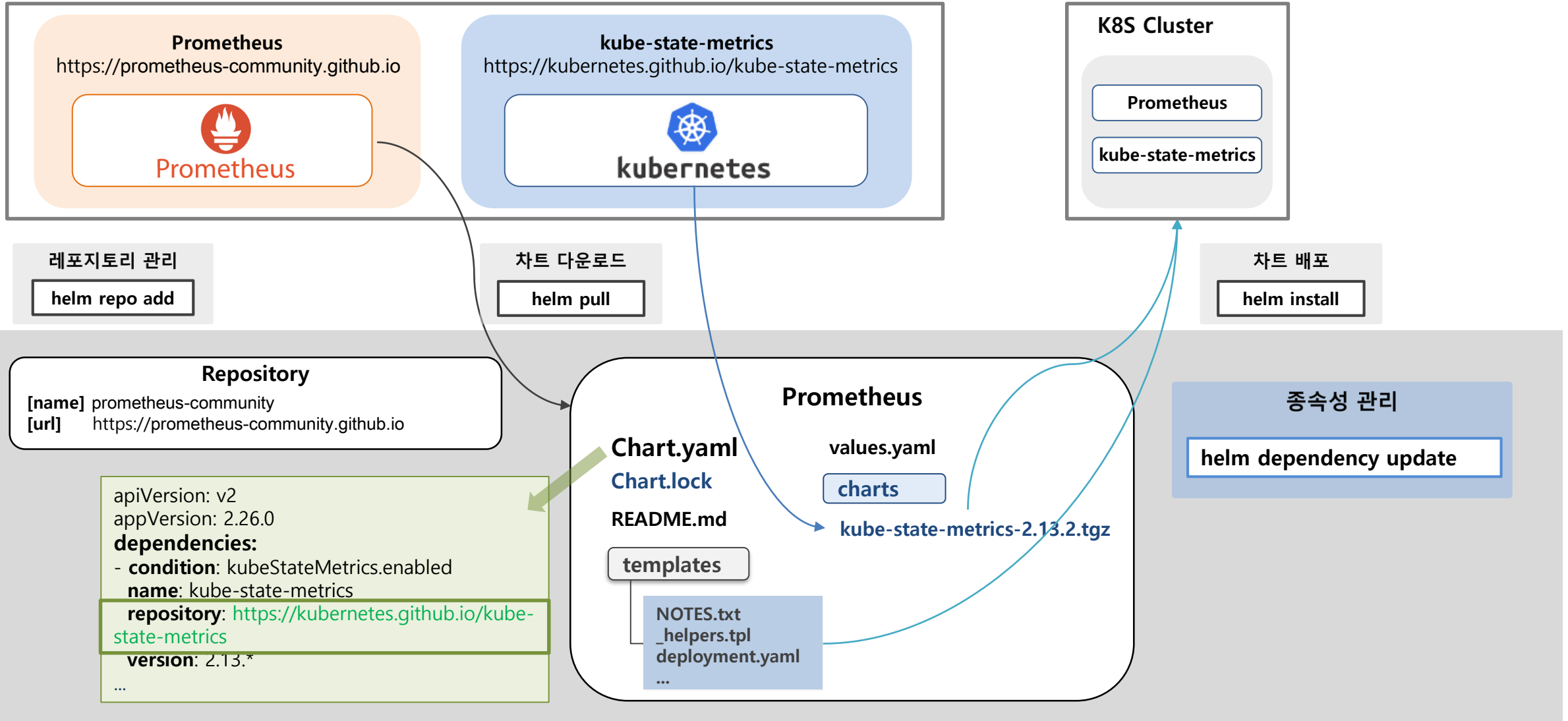
- 오픈소스 Helm 차트 분석 - Prometheus 개요

Helm Chart



- 오픈소스 Helm 차트 분석 - prometheus 종속성 관리

Helm Chart Repository



- 오픈소스 Helm 차트 분석 - prometheus 함수

templates (yaml)

```
<splitList>
{{- $url := splitList "/" "helm.sh/docs/helm" }}
host: {{ first $url }}
path: {{ rest $url | join "/" }}

<regexMatch>
regexmatch: {{ regexMatch ".*.ya?ml$" "config.yaml" }}

<index>
colors: "{{ index .Values.colors 0 }}"
path: /{{ index .Values "server" "path" "prefix" }}/ready

<semver>
{{- $version := semver "1.2.3-alpha.1+123" -}}

<semverCompare>
greaterthan: {{ semverCompare ">1.2.1" "1.2.3" }}
lessthan: {{ semverCompare "<1.2.1" "2.2.3" }}
equal: {{ semverCompare "=1.2.*" "1.2.3" }}
tilde: {{ semverCompare "~1.2.3" "1.2.0" }}
```

```
[ "helm.sh" "docs" "helm" ]
  first      rest      last
```

```
*.yaml *.yml
```

```
"blue"
```

```
"/prom/ready"
```

```
true 1.2.3 > 1.2.1
false
```

```
true #1.2.0 <= [1.2.*] < 1.3.0
false #1.2.3 <= [~1.2.3] < 1.3.0
```

```
<split>
{{- $url := split "/" "helm.sh/docs/helm" }}
```

```
{
  _0: "helm.sh"
  _1: "docs"
  _2: "helm"
}
```

values.yaml

```
colors:
- "blue"
- "red"
- "green"
```

```
server:
  path:
  prefix: "prom"
```

```
$version.Major = 1
$version.Minor = 2
$version.Patch = 3
$version.Prerelease = alpha.1
$version.Metadata = 123
$version.Original = 1.2.3-alpha.1+123
```

- 오픈소스 Helm 차트 분석 - prometheus (dependency)

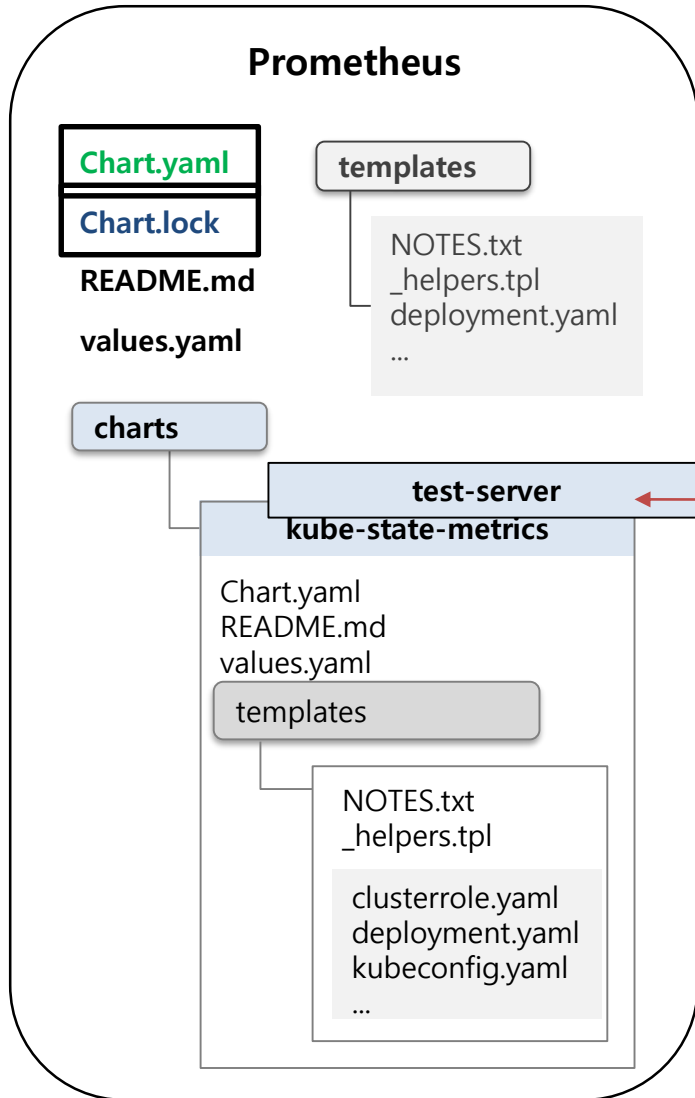


Chart.yaml

```

apiVersion: v2
appVersion: 2.26.0
dependencies:
- condition: kubeStateMetrics.enabled
  name: kube-state-metrics
  repository: https://kubernetes.github.io/kube-state-metrics
  version: 2.13.*
- condition: testServer.enabled
  name: test-server
  repository: https://test-server
  version: 1.0.0
sources:
- https://github.com/prometheus/alertmanager
- ...
version: 13.8.0
    
```

Chart.lock

```

dependencies:
- name: kube-state-metrics
  repository: https://kubernetes.github.io/kube-state-metrics
  version: 2.13.2
digest: sha256:43a00a8...7d3eb
generated: "2021-04-16T12:26:34.635893659Z"
    
```

values.yaml

```

kubeStateMetrics:
  enabled: true
testServer:
  enabled: true
    
```

Helm Chart Repository

kube-state-metrics
https://kubernetes.github.io/kube-state-metrics

- kube-state-metrics-helm-chart-2.13.3
- kube-state-metrics-helm-chart-2.13.2
- kube-state-metrics-helm-chart-2.13.1
- kube-state-metrics-helm-chart-2.13.0

종속성 관리

helm dependency list

| NAME | VERSION | REPOSITORY | STATUS |
|--------------------|---------|---|--------|
| kube-state-metrics | 2.13.* | https://kubernetes.github.io/kube-state-metrics | ok |

- 오픈소스 Helm 차트 분석 - prometheus (alertmanager > cm.yaml)

values.yaml

| | |
|---------------------------------|--------------|
| alertmanager: enabled: true | |
| nodeExporter: enabled: false | |
| alertmanagerFiles: | |
| alertmanager.yml: | key |
| global: {} | |
| receivers: | |
| - name: default-receiver | |
| route: | value |
| group_wait: 10s | |
| group_interval: 5m | |
| receiver: default-receiver | |
| repeat_interval: 3h | |
| server.yml: | key |
| global: {} | |
| servers: | value |
| - name: server | |

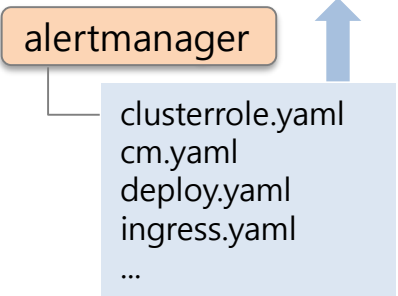
cm.yaml

```

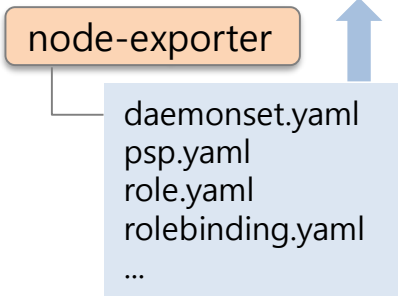
{{- if and .Values.alertmanager.enabled (and (empty .Values.alertmanager.configMapOverrideName)
(empty .Values.alertmanager.configFromSecret)) -}}
apiVersion: v1
kind: ConfigMap
metadata:
  labels:
    {{- include "prometheus.alertmanager.labels" . | nindent 4 }}
    name: {{ template "prometheus.alertmanager.fullname" . }}
  {{ include "prometheus.namespace" . | indent 2 }}
  data:
    {{- $root := . -}}
    {{- range $key, $value := .Values.alertmanagerFiles }}
    {{- if $key | regexMatch ".*www.ya?ml$" }}
    {{ $key }}: |
    {{ toYaml $value | default "{}" | indent 4 }}
    {{- else }}
    {{ $key }}: {{ toYaml $value | indent 4 }}
    {{- end }}
    {{- end -}}
    {{- end -}}

```

Condition: `{{- if and .Values.alertmanager.enabled }}`



Condition: `{{- if and .Values.nodeExporter.enabled }}`



_helpers.tpl

```

prometheus.alertmanager.labels
component: "alertmanager"
app: prometheus
release: prom
chart: prometheus-13.8.0
heritage: Helm
prometheus.alertmanager.fullname
prom-prometheus-alertmanager
prometheus.alertmanager.namespace
default

```

```

apiVersion: v1
kind: ConfigMap
metadata:
  labels:
    component: "alertmanager"
    app: prometheus
    release...
  name: prom-prometheus-alertmanager
  namespace: default
  data:
    alertmanager.yml: |
      global: {}
      receivers:
        - name: default-receiver
      route:
        group_inte
        group_w...
    server.yml: |
      global: {}
      servers:
        - name: server

```

- 오픈소스 Helm 차트 분석 - prometheus (alertmanager > ingress.yaml)

values.yaml

```
alertmanager:  
  enabled: true  
  ingress:  
    enabled: true  
    extraPaths: []  
  service:  
    servicePort: 80  
  
hosts:  
- alertmanager.domain.com  
- domain.com/alertmanager  
extraPaths: []
```

ingress.yaml

```
{{- if and .Values.alertmanager.enabled .Values.alertmanager.ingress.enabled -}}  
{{- $releaseName := prom  
{{- $serviceName := prom-prometheus-alertmanager name" . }}  
{{- $servicePort := 80  
{{- $extraPaths := []  
apiVersion: {{ template "ingress.apiVersion" . }}  
kind: Ingress  
...  
spec:  
  {{- if or (.Capabilities.APIVersions.Has "networking.k8s.io/v1/IngressClass")  
(.Capabilities.APIVersions.Has "networking.k8s.io/v1beta1/IngressClass") }}  
  {{- if .Values.alertmanager.ingress.ingressClassName }}  
  ingressClassName: {{ .Values.alertmanager.ingress.ingressClassName }}  
  {{- end }}  
  {{- end }}  
  rules:  
  {{- range .Values.alertmanager.ingress.hosts }}  
  {{- $url := splitList "/" . }}  
  - host: {{ first $url }} domain.com/alertmanager  
    http:  
      paths:  
      {{ if $extraPaths }}  
      {{ toYaml $extraPaths (omit $url 1) }}  
      {{- end }}  
      - path: /{{ rest $url | join "/" }}  
        backend:  
          serviceName: {{ $serviceName }} prom-prometheus-alertmanager  
          servicePort: {{ $servicePort }} 80  
  {{- end }}  
  ...
```

_helpers.tpl

```
prometheus.alertmanager.fullname  
prom-prometheus-alertmanager  
Ingress.apiVersion  
networking.k8s.io/v1beta1
```



```
.Capabilities.KubeVersion : v1.19.3  
.Capabilities.KubeVersion.Major : 1  
.Capabilities.KubeVersion.Minor : 19  
.Capabilities.KubeVersion.GitVersion  
: v1.19.2
```

```
apiVersion: networking.k8s.io/v1beta1  
kind: Ingress  
...  
spec:  
  rules:  
  - host: alertmanager.domain.com  
    http:  
      paths:  
      - path: /  
        backend:  
          serviceName: prom-prom...  
          servicePort: 80  
  - host: domain.com  
    http:  
      paths:  
      - path: /alertmanager  
  ...
```

- 오픈소스 Helm 차트 분석 - prometheus (server > sts.yaml)

values.yaml

```
server:  
  enabled: true  
  statefulSet :  
    enabled: true  
  
  enableServiceLinks: true  
  
  prefixURL:  
  extraArgs:  
    data.file: /data/app.data  
    log.file: /log/app.log  
  extraVolumeDirs:  
    - /etc/alerts  
    - /etc/data
```

sts.yaml

```
{{- if .Values.server.enabled -}}  
{{- if .Values.server.statefulSet.enabled -}}  
apiVersion: apps/v1  
kind: StatefulSet  
metadata:  
  ...  
spec:  
  spec:  
    ...  
    {{- if semverCompare ">=1.13-0" .Capabilities.KubeVersion.GitVersion }}  
    {{- if or (.Values.server.enableServiceLinks) (eq (.Values.server.enableServiceLinks | toString) "<nil>") }}  
      enableServiceLinks: true  
    {{- else }}  
      enableServiceLinks: false  
    {{- end }}  
    {{- end }}  
    serviceAccountName: {{ template "prometheus.serviceAccountName.server" . }}  
    {{- if .Values.server.extraInitContainers }}  
    initContainers:  
    {{ toYaml .Values.server.extraInitContainers | indent 8 }}  
    {{- end }}  
    containers:  
      ...  
      args:  
        - --volume-dir=/etc/config  
        - --webhook-url=http://127.0.0.1:9090{{ .Values.server.prefixURL }}/-/reload  
        {{- range $key, $value := .Values.configmapReload.prometheus.extraArgs }}  
        - data.file = /data/app.data  
        {{- end }}  
        {{- range .Values.configmapReload.prometheus.extraVolumeDirs }}  
        - --volume-dir={{ . }}  
        {{- end }}
```

_helpers.tpl

```
prometheus.serviceAccountName.server  
prom-prometheus-server
```



```
.Capabilities.KubeVersion : v1.19.3  
.Capabilities.KubeVersion.Major : 1  
.Capabilities.KubeVersion.Minor : 19  
.Capabilities.KubeVersion.GitVersion  
: v1.19.2
```

```
apiVersion: apps/v1  
kind: StatefulSet  
metadata:  
  ...  
spec:  
  ...  
  spec:  
    enableServiceLinks: true  
    serviceAccountName: prom-prom...  
    containers:  
      ...  
      args:  
        - --volume-dir=/etc/config  
        - --webhook-url=http://127.0.0.1:9090/-/reload  
        - --data.file = /data/app.data  
        - --log.file = /log/app.log  
        - --volume-dir=/etc/alerts  
        - --volume-dir=/etc/data
```