Helm Monitor

Automated rollback of Helm releases based on logs or metrics

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Helm

Upgrade a release using Helm:

```
$ helm upgrade my-release company-repo/common-chart
```

If a rollback is needed:

```
$ helm rollback my-release
```

Helm Plugins

Install a plugin:

```
$ helm plugin install https://github.com/repo/name
```

Usage:

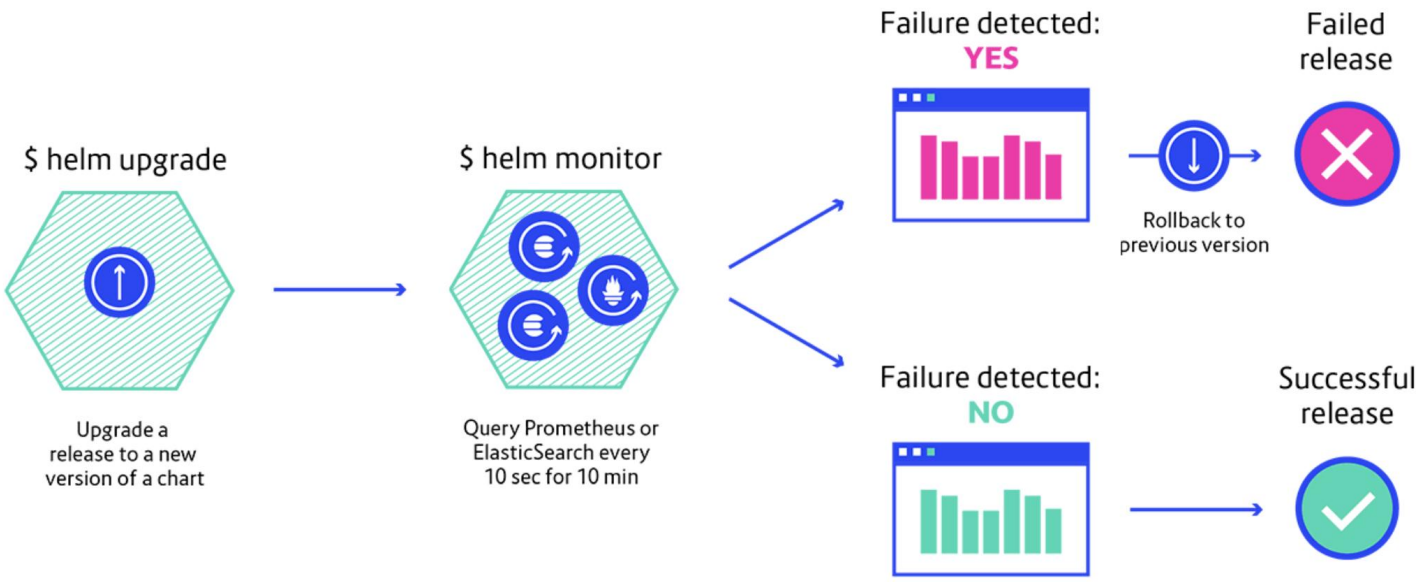
```
$ helm foo --help
```

Helm Plugins, under the hood

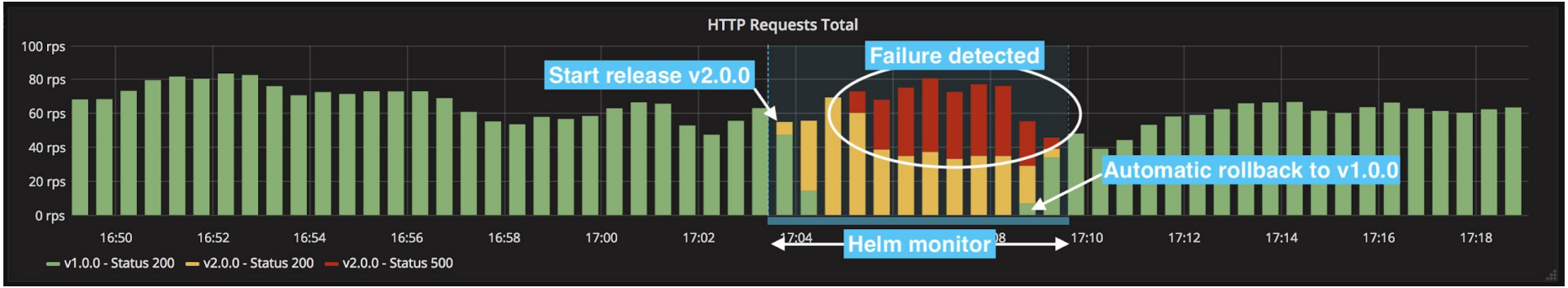
```
~/.helm/plugins/
    |- keybase/
        |- plugin.yaml
        |- keybase.sh
```

```
name: "keybase"
version: "0.1.0"
usage: "Integrate Keybase.io tools with Helm"
description: |-
  This plugin provides Keybase services to Helm.
ignoreFlags: false
useTunnel: false
Command: "$HELM_PLUGIN_DIR/keybase.sh"
```

Monitoring a release



Monitoring a release



Representation of a failed release using Prometheus and Grafana

Helm monitor

```
$ helm plugin install https://github.com/ContainerSolutions/helm-monitor

$ helm monitor --help

    This command monitor a release by querying Prometheus or Elasticsearch at a
    given interval and take care of rolling back to the previous version if the
    query return a non-empty result.

    Usage:
      monitor [command]

    Available Commands:
      elasticsearch query an elasticsearch server
      help          Help about any command
      prometheus    query a prometheus server
```

Helm monitor

A rollback is initiated if the 5xx error rate is over 0 as measured over the last 5 minutes:

```
$ helm monitor prometheus \
    --prometheus=http://prometheus \
    my-release \
    'rate(http_requests_total{code=~"^5.*$"}[5m]) > 0'
```

ElasticSearch, Lucene Query, rollback initiated if 500 status code are triggered:

```
$ helm monitor elasticsearch \
    frontend \
    'status:500 AND kubernetes.labels.app:app AND version:2.0.0'
```

Possible to use query DSL file:

```
$ helm monitor elasticsearch my-release ./elasticsearch-query.json
```

Demo!

Thanks!

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Next

Blog post about Helm monitor:
container-solutions.com/automated-rollback-helm-releases-based-logs-metrics/

Play around/contribute to the Helm monitor plugin:
github.com/ContainerSolutions/helm-monitor

Helm Plugins documentation:
github.com/kubernetes/helm/blob/master/docs/plugins.md