

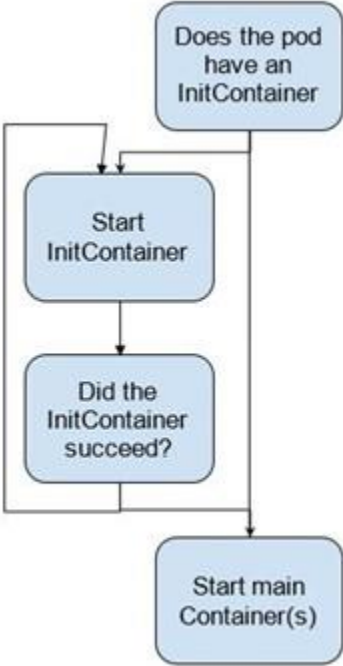
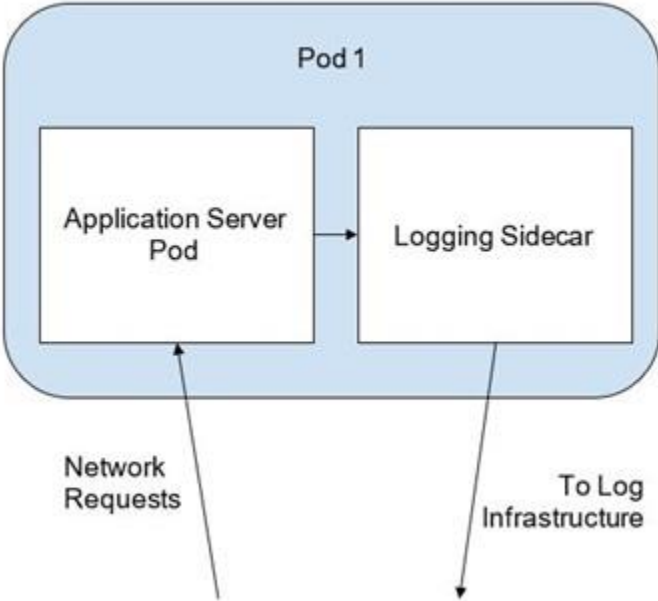
Chapter 1: Communicating with Kubernetes

No-images

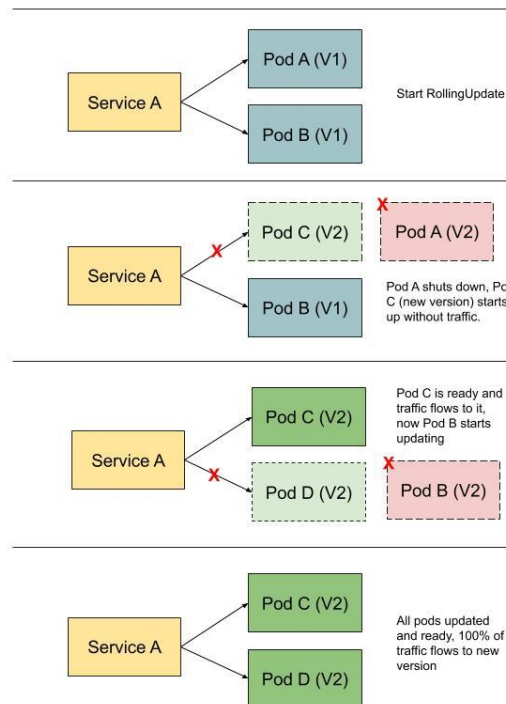
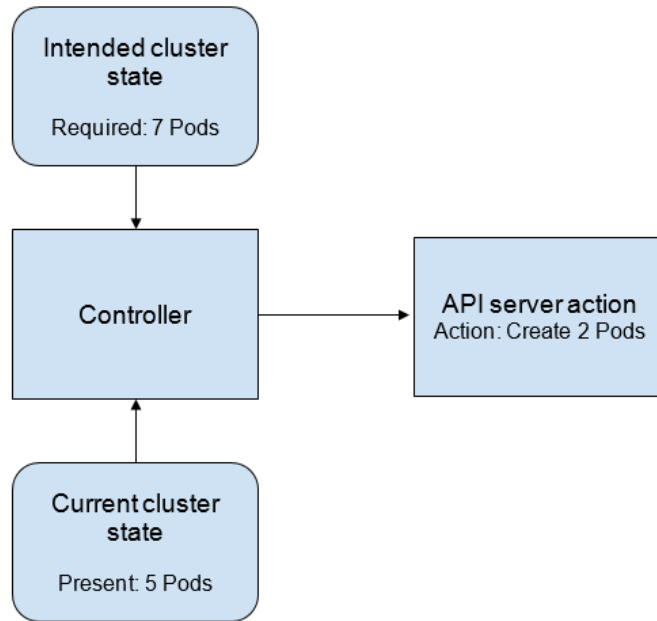
Chapter 2: Setting Up Your Kubernetes Cluster

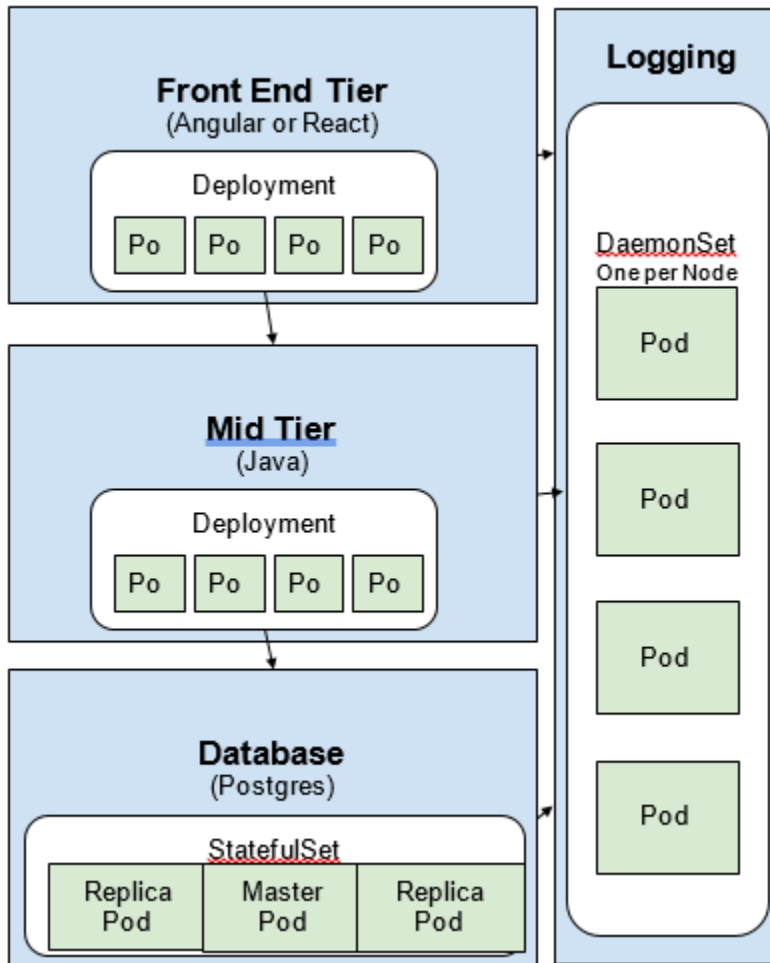
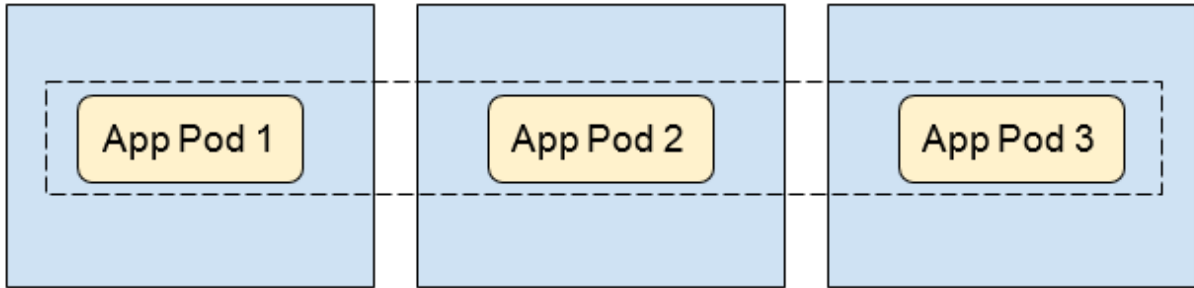
No-images

Chapter 3: Running Application Containers on Kubernetes Using Pods

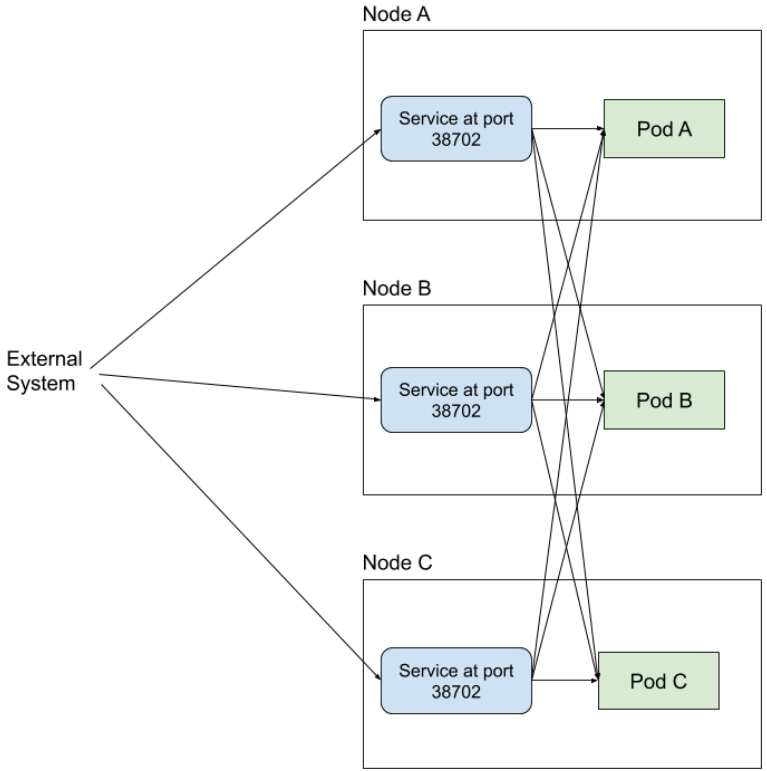
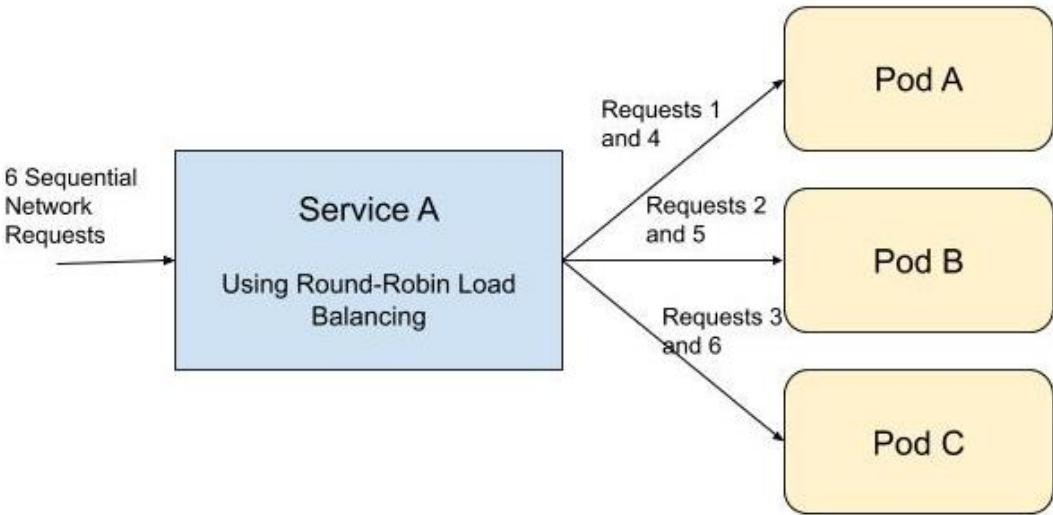


Chapter 4: Scaling and Deploying Your Application

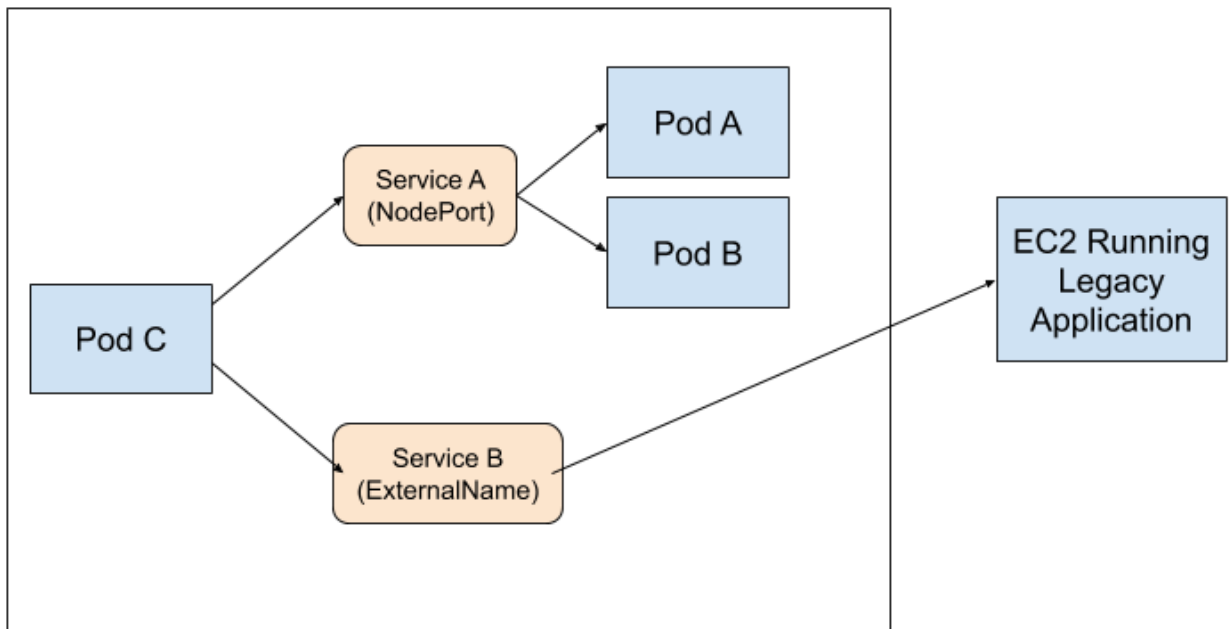




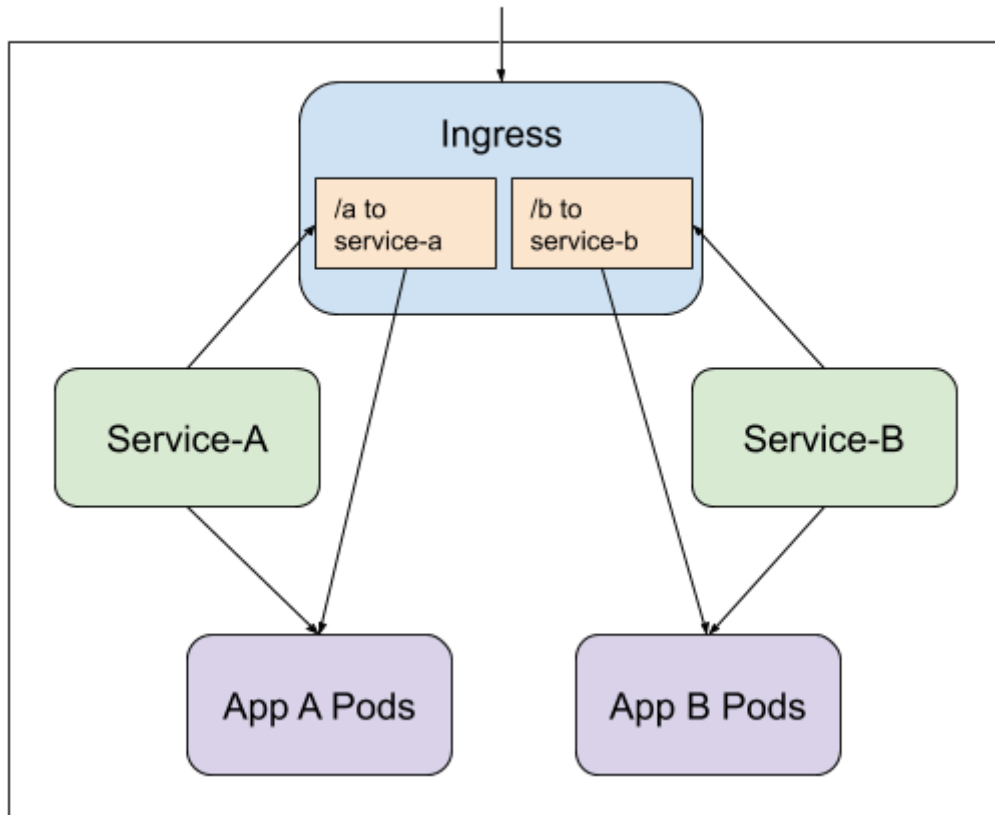
Chapter 5: Services and Ingress – Communicating with the Outside World



Kubernetes Cluster



External Application



Chapter 6: Kubernetes Application Configuration

No-images

Chapter 7: Storage on Kubernetes

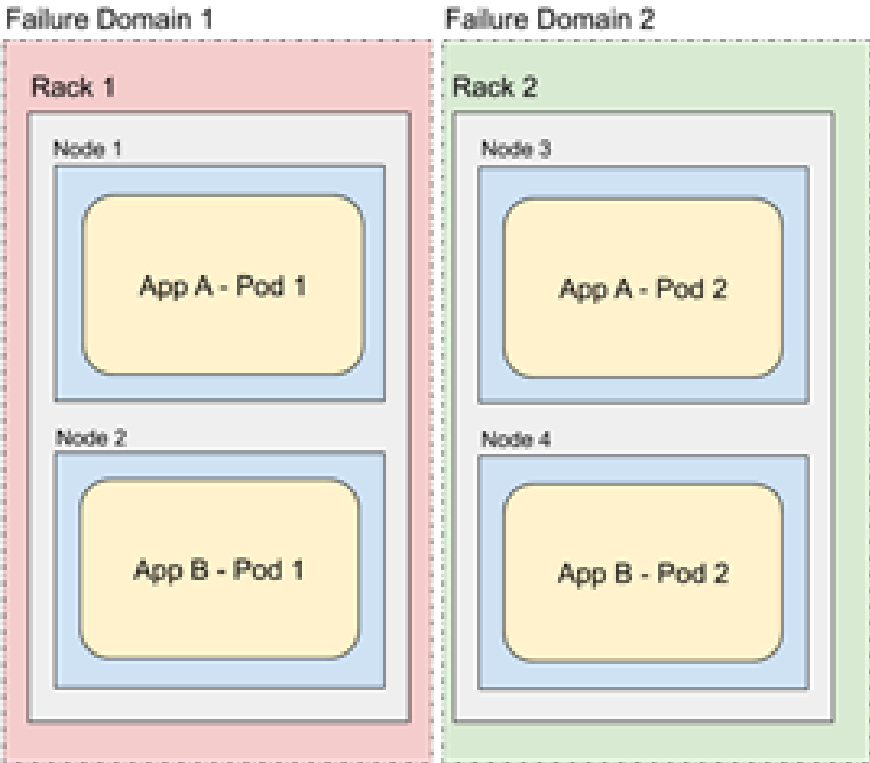
Name	Volume ID	Size	Volume Type	IOPS	Snapshot	Created
kubernetes-dynamic-pvc-██████████	██████████	1 GiB	gp2	100		August 28, 2020 at ...

Volumes: | vol-██████████ (kubernetes-dynamic-pvc-██████████)

Description | Status Checks | Monitoring | Tags

Volume ID	vol-██████████	Outposts ARN	-
Alarm status	None	Size	1 GiB
Snapshot	-	Created	August 28, 2020 at 9:46:26 AM UTC-4
Availability Zone	us-east-1a	State	available
Encryption	Encrypted	Attachment information	

Chapter 8: Pod Placement Controls



Chapter 9: Observability on Kubernetes

```

Events:
Type          Reason          Age           From           Message
-----
Warning       FailedScheduling 35s (x1 over 35s) default-scheduler 0/3 nodes are available:
3 Insufficient memory.
    
```

```

Conditions:
Type          Status  LastHeartbeatTime           LastTransitionTime           Reason                       Message
-----
OutOfDisk     False   Wed, 12 Mar 2020 22:45:03 -0400 Tue, 11 Mar 2020 07:10:44 -0400 KubeletHasSufficientDisk     kubelet has sufficient disk space available
MemoryPressure True    Wed, 12 Mar 2020 22:45:03 -0400 Tue, 11 Mar 2020 07:10:44 -0400 KubeletHasInsufficientMemory kubelet has insufficient memory available
DiskPressure  False   Wed, 12 Mar 2020 22:45:03 -0400 Tue, 11 Mar 2020 07:10:44 -0400 KubeletHasNoDiskPressure     kubelet has no disk pressure
Ready         True    Wed, 12 Mar 2020 22:45:03 -0400 Tue, 11 Mar 2020 07:10:44 -0400 KubeletReady                 kubelet is posting ready status
    
```

NAME	CPU(cores)	CPU%	MEMORY(bytes)	MEMORY%
ip-10-10-1-231.ec2.internal	22m	2%	355Mi	9%
NAME	CPU(cores)	CPU%	MEMORY(bytes)	MEMORY%
ip-10-10-1-109.ec2.internal	24m	2%	355Mi	9%
NAME	CPU(cores)	CPU%	MEMORY(bytes)	MEMORY%
ip-10-10-1-266.ec2.internal	29m	3%	354Mi	9%

Kubernetes Dashboard

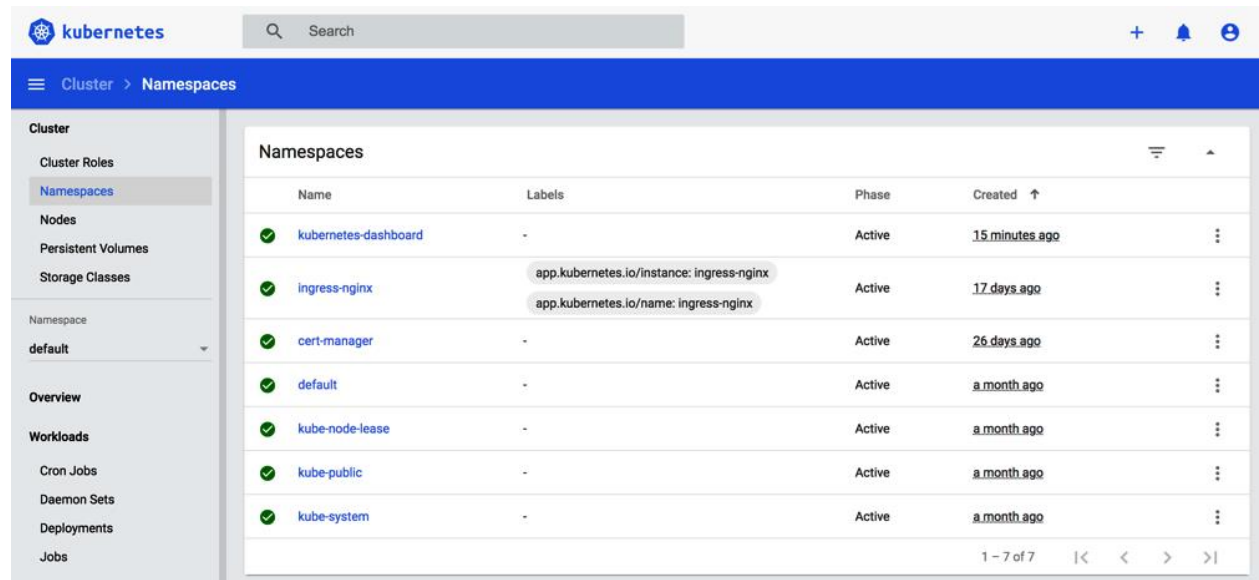
Token

Every Service Account has a Secret with valid Bearer Token that can be used to log in to Dashboard. To find out more about how to configure and use Bearer Tokens, please refer to the [Authentication](#) section.

Kubeconfig

Please select the kubeconfig file that you have created to configure access to the cluster. To find out more about how to configure and use kubeconfig file, please refer to the [Configure Access to Multiple Clusters](#) section.


Enter token *



Edit a resource

YAML JSON

```
1 kind: Deployment
2 apiVersion: apps/v1
3 metadata:
4   name: external-dns
5   namespace: default
6   selfLink: /apis/apps/v1/namespaces/default/deployments/external-dns
7   uid: 3ffdb53c-4363-4aa9-8239-af2a5b40a174
8   resourceVersion: '6346014'
9   generation: 1
10  creationTimestamp: '2020-09-02T01:25:26Z'
11  annotations:
12    deployment.kubernetes.io/revision: '1'
13    kubectl.kubernetes.io/last-applied-configuration: >
14    {
15      "apiVersion": "apps/v1", "kind": "Deployment", "metadata": {
16        "annotations": {}, "name": "external-dns",
17        "namespace": "default", "spec": {
18          "selector": { "matchLabels": { "app": "external-dns" } },
19          "strategy": { "type": "Recreate" },
20          "template": {
21            "metadata": { "labels": { "app": "external-dns" } },
22            "spec": {
23              "containers": [
24                {
25                  "args": [
26                    "--source=service",
27                    "--source=ingress",
28                    "--domain-filter=dakotamarketplace.net",
29                    "--provider=aws",
30                    "--policy=upsert-only",
31                    "--aws-zone-type=public",
32                    "--registry=txt",
33                    "--txt-owner-id=my-identifier"
34                  ],
35                  "image": "registry.opensource.zalan.do/teapot/external-dns:v0.5.9",
36                  "name": "external-dns"
37                }
38              ],
39              "serviceAccountName": "external-dns"
40            }
41          }
42        }
43      }
44    }
45  spec:
46    replicas: 1
47    selector:
48      matchLabels:
```

 This action is equivalent to: `kubectl apply -f <spec.yaml>`

[Update](#) [Cancel](#)

Enable query history

[Execute](#)

Table Graph

[<](#) Evaluation time [>](#)

No data queried yet

[Remove Panel](#)

[Add Panel](#)

Enable query history

Q kubelet_http_requests_total

Execute

Load time: 19ms Resolution: 14s Result series: 29

Table Graph

< 2020-06-02 23:58:29 x >

kubelet_http_requests_total{endpoint="https-metrics", instance="10.0.25.23:10250", job="kubelet", long_running="false", method="GET", metrics_path="/metrics", namespace="kube-system", node="ip-10-0-25-23.ec2.internal", path="invalid path", server_type="readwrite", service="kubelet"} 5
kubelet_http_requests_total{endpoint="https-metrics", instance="10.0.25.23:10250", job="kubelet", long_running="false", method="GET", metrics_path="/metrics", namespace="kube-system", node="ip-10-0-25-23.ec2.internal", path="containerLogs", server_type="readwrite", service="kubelet"} 254
kubelet_http_requests_total{endpoint="https-metrics", instance="10.0.25.23:10250", job="kubelet", long_running="false", method="GET", metrics_path="/metrics", namespace="kube-system", node="ip-10-0-25-23.ec2.internal", path="healthz", server_type="readwrite", service="kubelet"} 80440
kubelet_http_requests_total{endpoint="https-metrics", instance="10.0.25.23:10250", job="kubelet", long_running="false", method="GET", metrics_path="/metrics", namespace="kube-system", node="ip-10-0-25-23.ec2.internal", path="metrics", server_type="readwrite", service="kubelet"} 110012
kubelet_http_requests_total{endpoint="https-metrics", instance="10.0.25.23:10250", job="kubelet", long_running="false", method="GET", metrics_path="/metrics", namespace="kube-system", node="ip-10-0-25-23.ec2.internal", path="metrics/cadvisor", server_type="readwrite", service="kubelet"} 109338
kubelet_http_requests_total{endpoint="https-metrics", instance="10.0.25.23:10250", job="kubelet", long_running="false", method="GET", metrics_path="/metrics", namespace="kube-system", node="ip-10-0-25-23.ec2.internal", path="pods", server_type="readwrite", service="kubelet"} 406718
kubelet_http_requests_total{endpoint="https-metrics", instance="10.0.25.23:10250", job="kubelet", long_running="false", method="GET", metrics_path="/metrics", namespace="kube-system", node="ip-10-0-25-23.ec2.internal", path="spec", server_type="readwrite", service="kubelet"} 160880

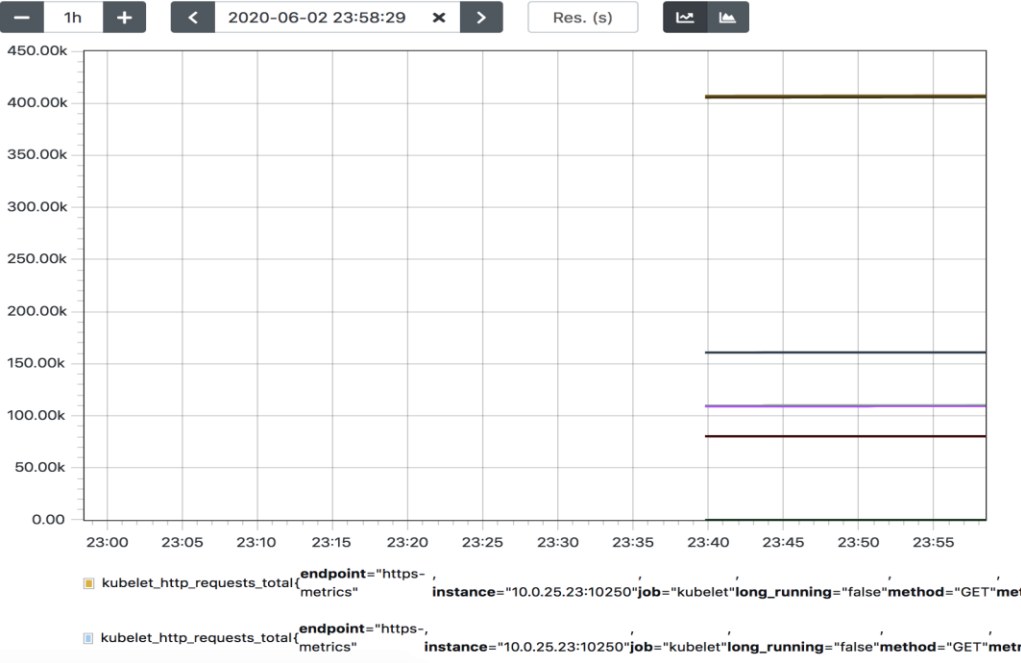
Enable query history

Q kubelet_http_requests_total

Execute

Load time: 32ms Resolution: 14s Result series: 29

Table Graph



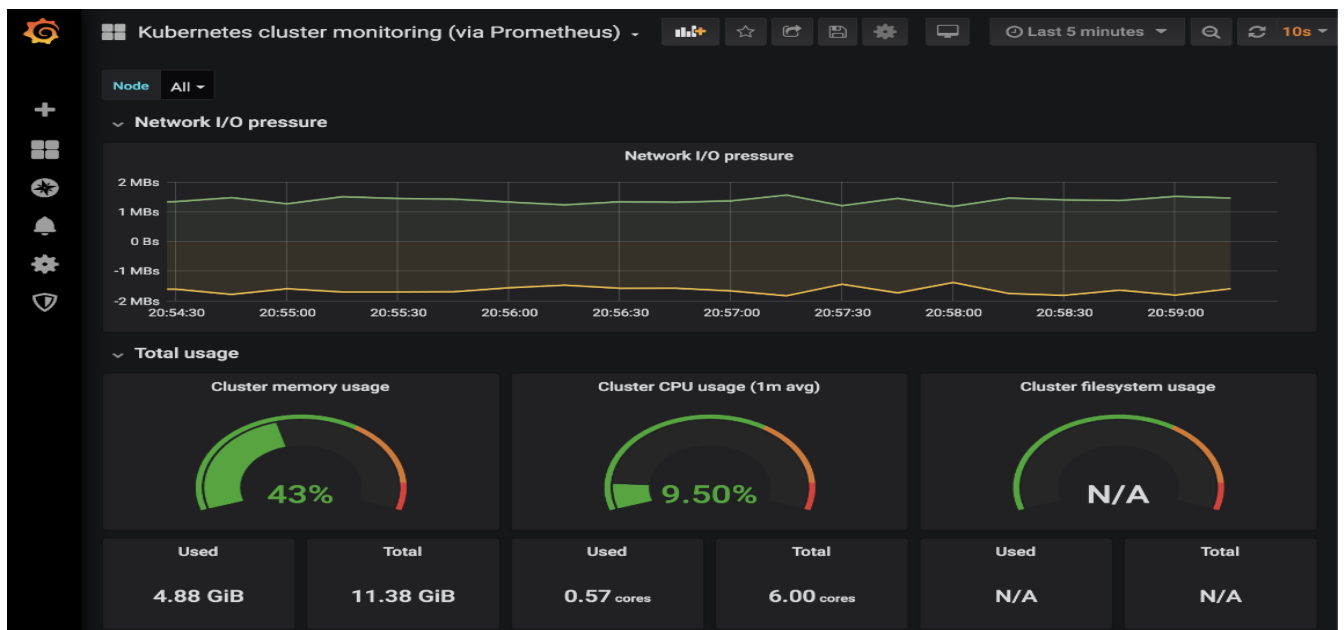
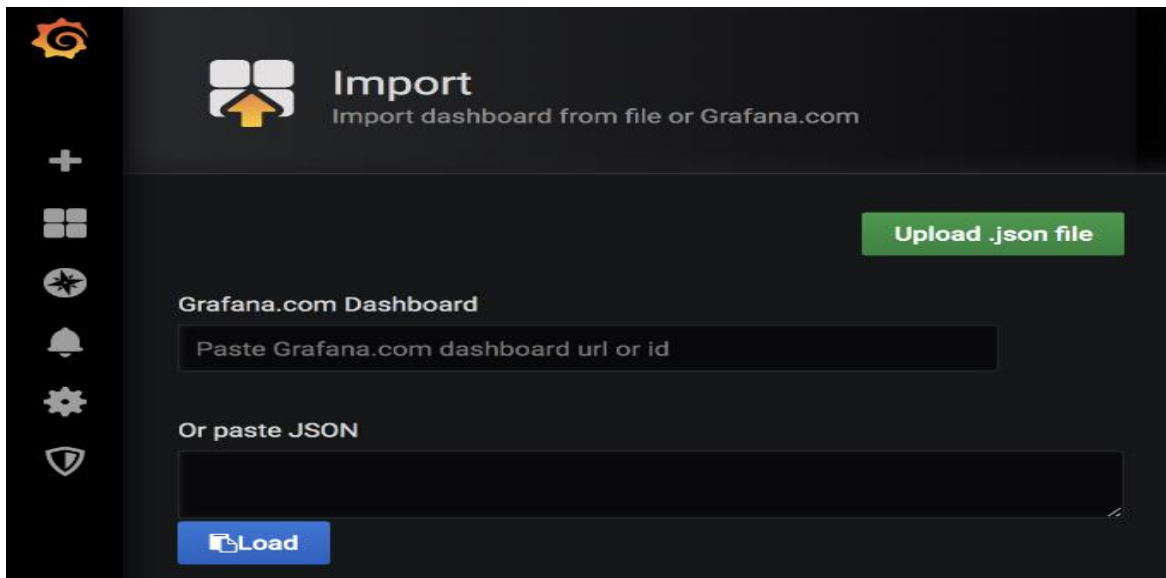
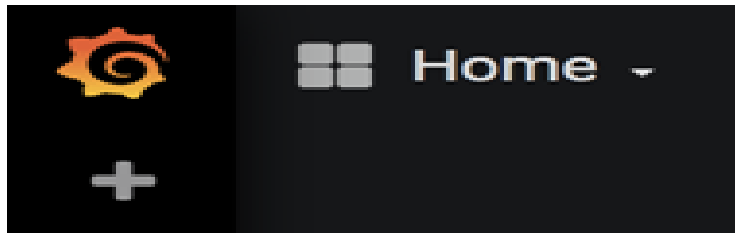
Change Password

Before you can get started with awesome dashboards we need you to make your account more secure by changing your password. You can change your password again later.

New password

Confirm new password

Skip Save



Filter **Group** Receiver: All Silenced Inhibited

+ Silence

Custom matcher, e.g. `env="production"`

- + Expand all groups
- + Not grouped 2 alerts
- + Not grouped 1 alert
- + namespace="kube-system" + 2 alerts
- + namespace="monitoring" + 4 alerts

kibana

- Discover
- Visualize
- Dashboard
- Timelion
- APM
- Dev Tools
- Monitoring
- Management

Collapse

Add Data to Kibana Data already in Elasticsearch? Set up index patterns

Use these solutions to quickly turn your data into pre-built dashboards and monitoring systems.

<p>APM</p> <p>APM automatically collects in-depth performance metrics and errors from inside your applications.</p> <p>Add APM</p>	<p>Logging</p> <p>Ingest logs from popular data sources and easily visualize in preconfigured dashboards.</p> <p>Add log data</p>	<p>Metrics</p> <p>Collect metrics from the operating system and services running on your servers.</p> <p>Add metric data</p>	<p>Security analytics</p> <p>Centralize security events for interactive investigation in ready-to-go visualizations.</p> <p>Add security events</p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>Visualize and Explore Data</p> <ul style="list-style-type: none"> APM Automatically collect in-depth performance metrics and errors from inside your applications. Dashboard Display and share a collection of visualizations and saved searches. Discover Interactively explore your data by querying and filtering raw documents. Graph Surface and analyze relevant relationships in your Elasticsearch data. Machine Learning Automatically model the normal behavior of your time series data to detect anomalies. Timelion Use an expression language to analyze time series data and visualize the results. Visualize Create visualizations and aggregate data stores in your Elasticsearch indices. 	<p>Manage and Administer the Elastic Stack</p> <ul style="list-style-type: none"> Console Skip cURL and use this JSON interface to work with your data directly. Index Patterns Manage the index patterns that help retrieve your data from Elasticsearch. Monitoring Track the real-time health and performance of your Elastic Stack. Saved Objects Import, export, and manage your saved searches, visualizations, and dashboards. Security Settings Protect your data and easily manage who has access to what with users and roles. Watcher Detect changes in your data by creating, managing, and monitoring alerts.
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

kibana 0 hits New Save Open Share Reporting Auto-refresh Last 12 hours

h Uses lucene query syntax

Add a filter +

No results found 😊

Unfortunately I could not find any results matching your search. I tried really hard. I looked all over the place and frankly, I just couldn't find anything good. Help me, help you. Here are some ideas:

Expand your time range

I see you are looking at an index with a date field. It is possible your query does not match anything in the current time range, or that there is no data at all in the currently selected time range. Click the button below to open the time picker. For future reference you can open the time picker by clicking on the [time picker](#) button in the top right corner of your screen.

Refine your query

The search bar at the top uses Elasticsearch's support for Lucene [Query String syntax](#). Let's say we're searching web server logs that have been parsed into a few fields.

Examples

Find requests that contain the number 200, in any field:

```
200
```

Or we can search in a specific field. Find 200 in the status field:

```
status:200
```

Find all status codes between 400-499:

```
status:[400 TO 499]
```

kibana Visualize / New

Select visualization type

Search visualization types...

Basic Charts

- Area
- Heat Map
- Horizontal Bar
- Line
- Pie
- Vertical Bar

Data

- Data Table
- Gauge
- Goal
- Metric

Maps

- Coordinate Map
- Region Map

kibana

- Discover
- Visualize
- Dashboard**
- Timelion
- APM
- Dev Tools
- Monitoring
- Management

Dashboard / Editing New Dashboard Save Cancel Add Options Share Auto-refresh Last 12 hours

Search... (e.g. status:200 AND extension:PHP) Uses lucene query syntax

This dashboard is empty. Let's fill it up!

Click the **Add** button in the menu bar above to add a visualization to the dashboard.

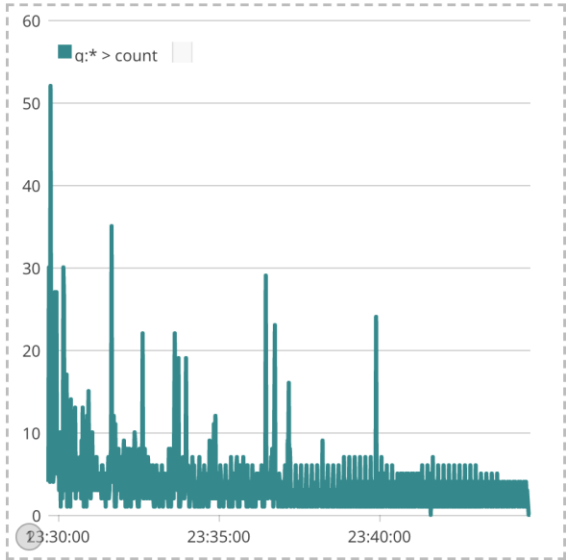
If you haven't set up any visualizations yet, visit the [Visualize app](#) to create your first visualization.

kibana

- Discover
- Visualize
- Dashboard
- Timelion**
- APM
- Dev Tools
- Monitoring
- Management

New Add Save Delete Open Options Help Auto-refresh Last 15 minutes

.es(*) auto



NAME	DESIRED	CURRENT	UP-TO-DATE	AVAILABLE	AGE
jaeger-operator	1	1	1	1	1m

NAMESPACE	NAME	HOSTS	ADDRESS	PORTS	AGE
observability	all-in-one-query	*	10.200.208.231	80	46s

Search JSON File

Service (0)

Operation (0)

Tags ?

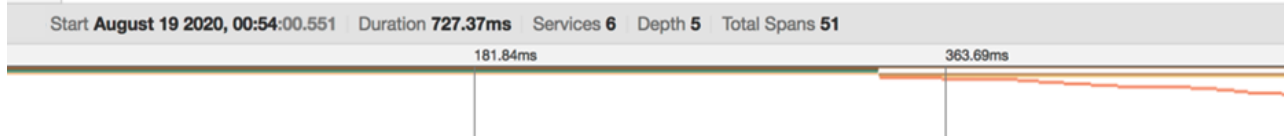
Lookback

Min Duration

Max Duration



← ▾ frontend: HTTP GET /dispatch 1b4b74e Find...



Service & Operation	0ms	181.84ms	363.69ms
frontend HTTP GET /dispatch	[Timeline bar from 0ms to 363.69ms]		
frontend HTTP GET: /customer	[Timeline bar from 0ms to 337.62ms]		
frontend HTTP GET	[Timeline bar from 0ms to 337.61ms]		
customer HTTP GET /customer	[Timeline bar from 0ms to 337.27ms]		
mysql SQL SELECT	[Timeline bar from 0ms to 337.15ms]		
frontend /driver.DriverService/FindNearest	[Timeline bar from 0ms to 212ms]		
driver /driver.DriverService/FindNearest	[Timeline bar from 0ms to 211.34ms]		
redis FindDriverIDs	[Timeline bar from 0ms to 23.89ms]		
redis GetDriver	[Timeline bar from 0ms to 29.16ms]		

Chapter 10: Troubleshooting Kubernetes

```
Conditions:
Type          Status    LastTransitionTime          Reason          Message
-----
OutOfDisk     Unknown  Fri, 22 May 2020 04:19:00 +0000 NodeStatusUnknown kubelet stopped posting node status.
MemoryPressure False     Thu, 21 May 2020 14:42:51 +0000 KubeletHasSufficientMemory kubelet has sufficient memory available
DiskPressure  False     Thu, 21 May 2020 14:42:51 +0000 KubeletHasNoDiskPressure  kubelet has no disk pressure
Ready         Unknown  Fri, 22 May 2020 04:19:00 +0000 NodeStatusUnknown  kubelet stopped posting node status.
```

```
....
Events:
Type          Reason      Age          From          Message
-----
Normal        Scheduled   5m           default-scheduler Successfully assigned app-1-pod-2821252345-tj8ks to node-01
Normal        BackOff     4m (x2 over 5m) kubelet, node-01 Back-off pulling image "myappimage:lates"
Normal        Pulling     3m (x2 over 5m) kubelet, node-01 pulling image "myappimage:lates"
Warning       Failed      4m (x2 over 5m) kubelet, node-01 Error: ErrImagePull
Warning       Failed      4m (x2 over 5m) kubelet, node-01 Failed to pull image "myappimage:lates": rpc error: code = Unknown desc = Error response from daemon: manifest for myappimage:lates not found
```

Chapter 11: Template Code Generation and CI/CD on Kubernetes

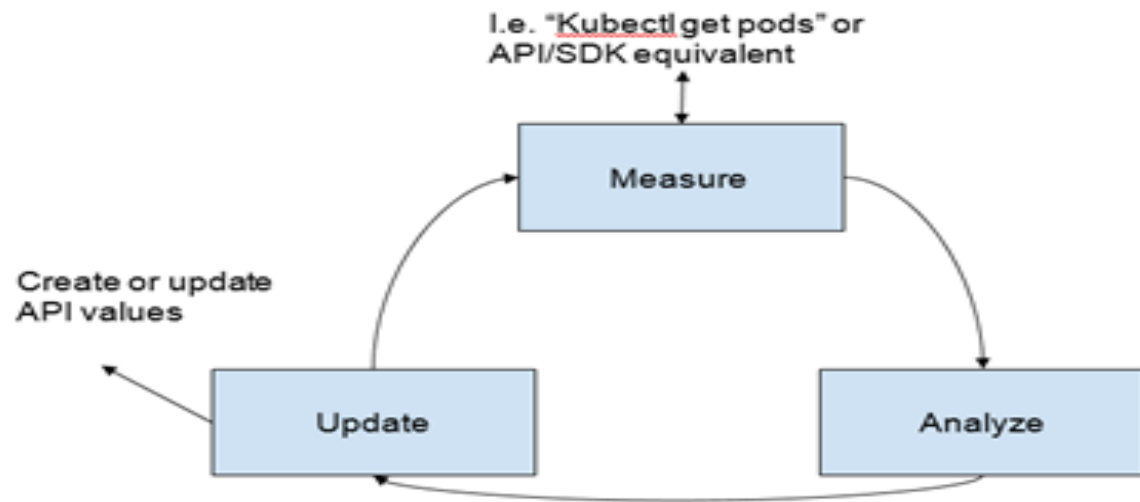
```
certmanager-cert-manager-cainjector-token-829kk  kubernetes.io/service-account-token  3  24m
certmanager-cert-manager-token-hh6gn            kubernetes.io/service-account-token  3  24m
certmanager-cert-manager-webhook-ca              Opaque                                3  24m
certmanager-cert-manager-webhook-token-cstp8    kubernetes.io/service-account-token  3  24m
default-token-d6hgh                              kubernetes.io/service-account-token  3  24m
sh.helm.release.v1.certmanager.v1               helm.sh/release.v1                   1  24m
```

```
NAME          NAMESPACE    REVISION    UPDATED                               STATUS    CHART          APP VERSION
certmanager  cert-manager  1           2020-05-23 19:07:04.798578 -0400 EDT  deployed  cert-manager-v0.16.1  v0.16.1
```

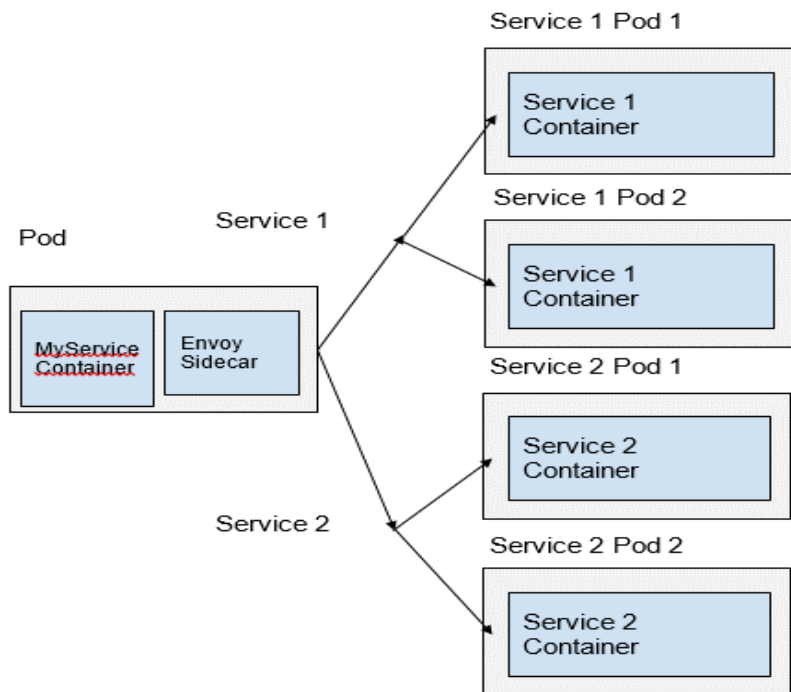
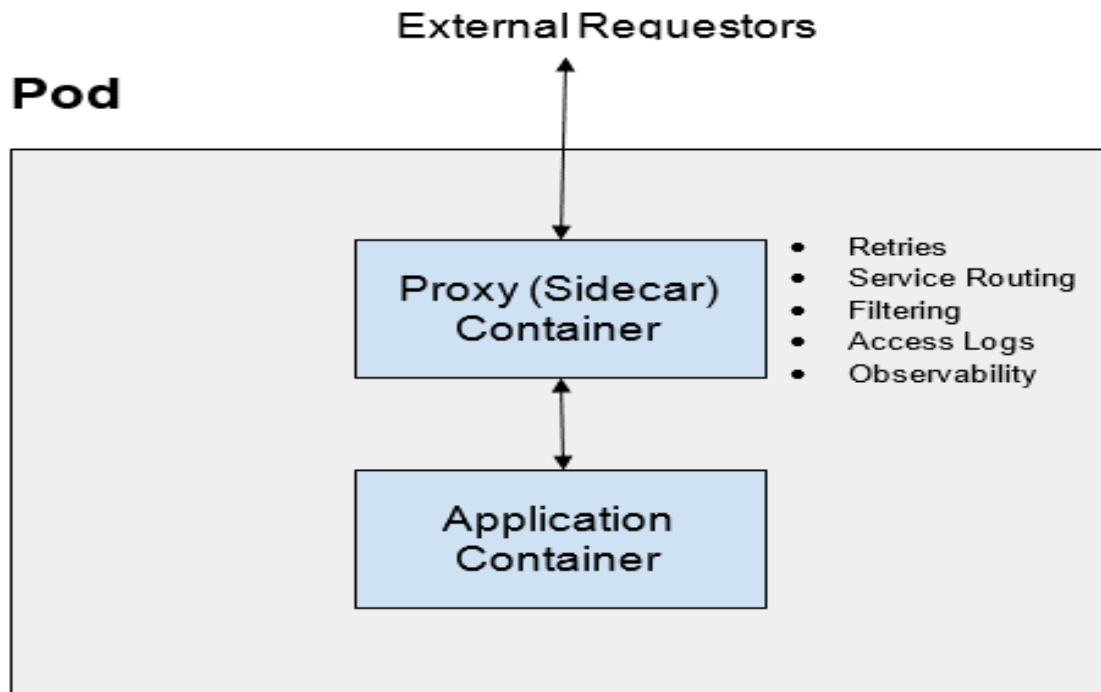
Chapter 12: Kubernetes Security and Compliance

No-images

Chapter 13: Extending Kubernetes with CRDs

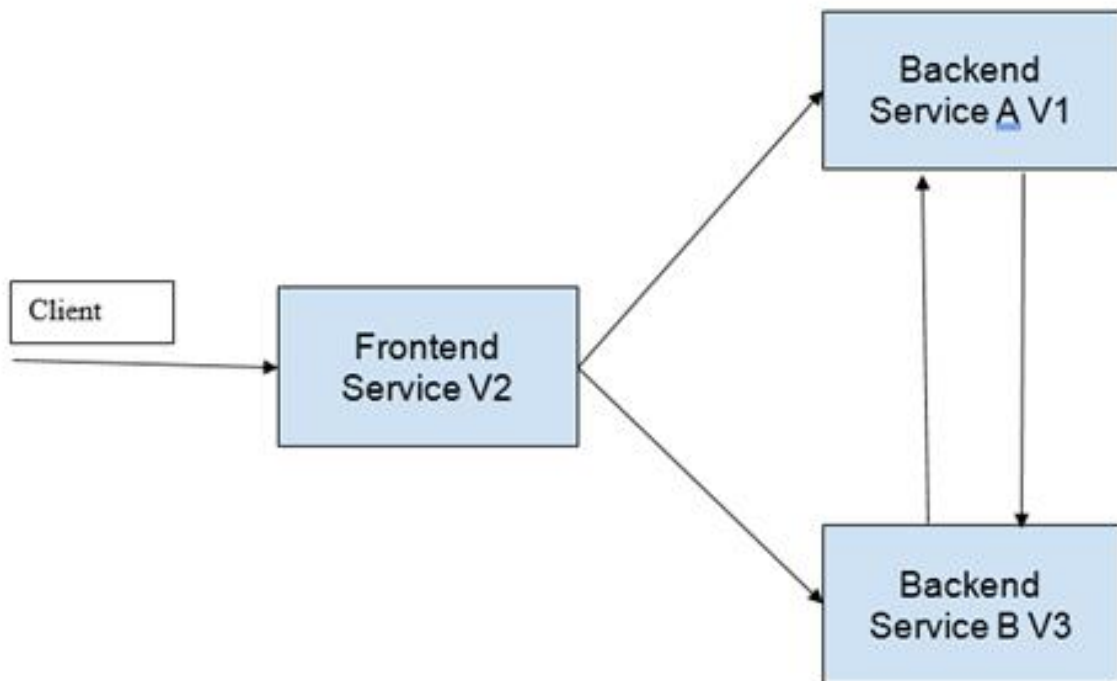


Chapter 14: Service Meshes and Serverless





Istio core installed
Istiod installed
Egress gateways installed
Ingress gateways installed
Installation complete



Chapter 15: Stateful Workloads on Kubernetes

NAMESPACE	NAME	READY	STATUS	RESTARTS	AGE
default	minio-operator-85ccdcfb6-r8g8b	1/1	Running	0	74m
default	my-tenant-console-8696cd7d84-6dwxq	1/1	Running	0	30s
default	my-tenant-console-8696cd7d84-gkv7t	1/1	Running	0	30s
default	my-tenant-zone-0-0	1/1	Running	0	50s
default	my-tenant-zone-0-1	1/1	Running	0	50s

Buckets

Search Buckets [+ Create Bucket](#)

Name	Creation Date	Size	Actions
my-bucket	Sun Nov 01 2020 19:00:30 GMT-0500	0 B	

Total Objects 1	Usage 4 B
---------------------------	---------------------



Username: *

Password: *

Login

▼ Nodes

Name	File descriptors ?
rabbit@rabbitmq-0.rabbitmq-headless.default.svc.cluster.local	99 1048576 available

▼ Add a new queue

Type:

Name: *

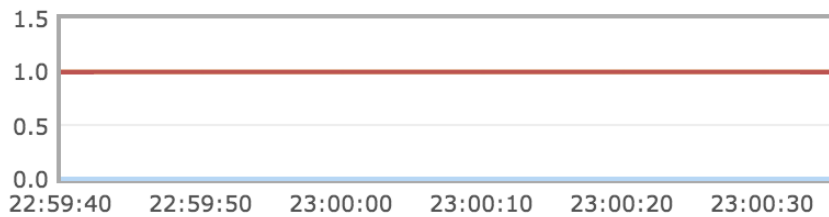
Durability:

Auto delete: ?

Arguments: =

Add [Message TTL ?](#) | [Auto expire ?](#) | [Max length ?](#) | [Max length bytes ?](#) | [Overflow behaviour ?](#) | [Dead letter exchange ?](#) | [Dead letter routing key ?](#) | [Single active consumer ?](#) | [Maximum priority ?](#) | [Lazy mode ?](#) | [Master locator ?](#)

Queued messages [last minute ?](#)



Ready	1
Unacked	0
Total	1

