**Installing & Running the Admission Controller with DogStatsD on a Linux System**

### 1. ****Install Dependencies****

sudo apt update && sudo apt install -y python3 python3-pip

pip3 install flask datadog

### 2. ****Install and Configure Datadog Agent****

* Install the Datadog Agent:

DD\_AGENT\_MAJOR\_VERSION=7 DD\_API\_KEY=YOUR\_API\_KEY DD\_SITE="datadoghq.com" \

bash -c "$(curl -L https://s3.amazonaws.com/dd-agent/scripts/install\_script.sh)"

* Enable DogStatsD and configure it to listen for custom metrics:

sudo sh -c 'echo "use\_dogstatsd: true" >> /etc/datadog-agent/datadog.yaml'

* Restart the Datadog Agent:

sudo systemctl restart datadog-agent

* Verify the Datadog Agent status:

datadog-agent status | grep dogstatsd

### 3. ****Create the Admission Controller Script****

from flask import Flask, request, jsonify

from datadog import DogStatsd

import time

app = Flask(\_\_name\_\_)

statsd = DogStatsd(host="127.0.0.1", port=8125)

@app.route("/validate", methods=["POST"])

def validate():

start\_time = time.time()

try:

admission\_request = request.get\_json()

admission\_response = {"response": {"uid": admission\_request["request"]["uid"], "allowed": True}}

response\_code = 200

except Exception as e:

response\_code = 500

admission\_response = {"error": str(e)}

response\_time = time.time() - start\_time

statsd.increment("admissionreview.http\_response\_status", tags=[f"status\_code:{response\_code}"])

statsd.histogram("admissionreview.response\_time", response\_time)

return jsonify(admission\_response), response\_code

if \_\_name\_\_ == "\_\_main\_\_":

app.run(host="0.0.0.0", port=5000)

* Save this as admission\_controller.py.

### 4. ****Create a Systemd Service****

sudo nano /etc/systemd/system/admission-metrics.service

Add the following content:

[Unit]

Description=Kubernetes Admission Controller Metrics Service

After=network.target

[Service]

User=root

ExecStart=/usr/bin/python3 /path/to/admission\_controller.py

Restart=always

[Install]

WantedBy=multi-user.target

* Start the service:

sudo systemctl enable admission-metrics

sudo systemctl start admission-metrics

### 5. ****Verify the Setup****

* Check the service status:

sudo systemctl status admission-metrics

* Send a test request:

curl -X POST http://localhost:5000/validate -H "Content-Type: application/json" -d '{

"apiVersion": "admission.k8s.io/v1",

"kind": "AdmissionReview",

"request": {"uid": "1234", "object": {}}

}'

* Check Datadog metrics:

datadog-agent status | grep admissionreview

* Validate DogStatsD is receiving metrics:

echo -n "admissionreview.response\_time:0.02|h" | nc -u -w1 127.0.0.1 8125