#!/bin/bash

# Update the system

sudo yum update -y

# Install Python3 and pip

sudo yum install -y python3 python3-pip

# Install Flask, psutil, and Flask-Cors

sudo pip3 install flask psutil Flask-Cors

# Install stress via the EPEL repository

sudo yum install -y epel-release

sudo yum install -y stress

# Create the Flask app

cat << 'EOF' > /home/ec2-user/app.py

from flask import Flask, render\_template, jsonify

from flask\_cors import CORS

import psutil

import subprocess

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

CORS(app)

stress\_process = None

@app.route('/')

def index():

return render\_template('index.html')

@app.route('/cpu\_percentage')

def cpu\_percentage():

return jsonify(cpu=psutil.cpu\_percent(interval=2))

@app.route('/increase\_load')

def increase\_load():

global stress\_process

if not stress\_process:

stress\_process = subprocess.Popen(['stress', '--cpu', '1'])

return jsonify(status='Load Increased')

@app.route('/cancel\_load')

def cancel\_load():

global stress\_process

if stress\_process:

subprocess.run(['pkill', 'stress'])

stress\_process = None

return jsonify(status='Load Cancelled')

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

app.run(host='0.0.0.0', port=80)

EOF

# Create the HTML template directory and file

mkdir -p /home/ec2-user/templates

cat << 'EOF' > /home/ec2-user/templates/index.html

<!DOCTYPE html>

<html>

<head>

<title>Dev Cloud Hub - CPU Control</title>

<style>

body {

font-family: Arial, sans-serif;

text-align: center;

}

.branding {

color: #0077B5;

font-weight: bold;

font-size: 24px;

margin-top: 20px;

}

.meter {

height: 20px;

position: relative;

background: #555;

border-radius: 25px;

padding: 10px;

width: 70%;

margin: 0 auto;

box-shadow: inset 0 -1px 1px rgba(255, 255, 255, 0.3);

}

.meter > span {

display: block;

height: 100%;

border-radius: 20px;

background-color: #33cc33;

position: relative;

overflow: hidden;

}

</style>

<script>

function updateCpuUsage() {

fetch('/cpu\_percentage')

.then(response => response.json())

.then(data => {

const percentage = data.cpu;

document.getElementById('cpu-percentage-meter').style.width = percentage + '%';

document.getElementById('cpu-text').innerText = percentage + '%';

});

}

function increaseLoad() {

fetch('/increase\_load');

}

function cancelLoad() {

fetch('/cancel\_load');

}

setInterval(updateCpuUsage, 2000);

</script>

</head>

<body onload="updateCpuUsage()">

<h2 class="branding">Dev Cloud Hub</h2>

<a href="https://devcloudhub.info" target="\_blank" style="margin-bottom: 20px; display: block;">Visit our Website</a>

<div class="meter">

<span id="cpu-percentage-meter"></span>

</div>

<p id="cpu-text" style="margin-top: 20px;">Loading...</p>

<button onclick="increaseLoad()">Increase CPU Load</button>

<button onclick="cancelLoad()">Cancel Load</button>

<p style="margin-top: 20px;">Powered by <span class="branding">Dev Cloud Hub</span></p>

</body>

</html>

EOF

# Set the correct permissions

chown -R ec2-user:ec2-user /home/ec2-user/

# Start the Flask app and log output

nohup /usr/bin/python3 /home/ec2-user/app.py > /home/ec2-user/flask\_app.log 2>&1 &