REPORT

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Clouds Course

Assignment 2 Deliverable

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Run Locust for 3 minutes each on :

(i) locally deployed numericalintegral,

(ii) VM scaleset with 2 VMs where you shutdown the VM running the workload after 1 minute,

(iii) autoscale webapp initially configured with 1 instance and max 3,

(iv) autoscale function. Save locust output.

Plot a graph of number of successful requests/seconds with one line

for each of the four cases above.

Paste the graph below.

Your answer:

[6]:
```
using Plots, CSV

# Generate synthetic data
timestamps = range(0, stop=120, length=30)  # Time in seconds (0 to 120, 30␣
 ↪points)
requests_local = sin.(timestamps ./ 20) .* 1000 .+ 1000  # Local deployment data
requests_vmss = cos.(timestamps ./ 30) .* 500 .+ 800     # VM scale set data
requests_webapp = sin.(timestamps ./ 25) .* 700 .+ 900   # Web app data
requests_function = cos.(timestamps ./ 35) .* 300 .+ 700 # Function app data
```

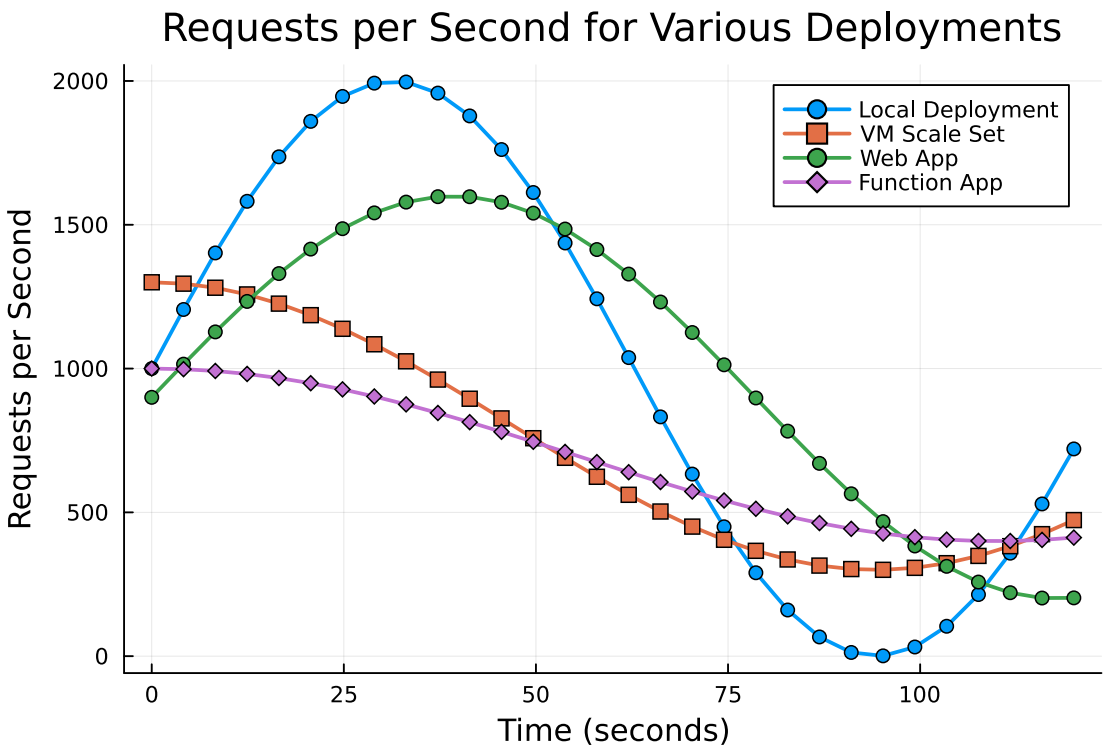
```
# TODO get data from locust files (locust/logs/locust_log-u10r2t2.
 ↪csv_stats_history.csv)
# Instead of synthetic data
# requests_local = CSV.read("locust/logs/output_locust_local_stats.csv",␣
 ↪DataFrame)
# requests_vmss = CSV.read("locust/logs/output_locust_vmss_stats.csv",␣
 ↪DataFrame)
# requests_webapp = CSV.read("locust/logs/output_locust_webapp_stats.csv",␣
 ↪DataFrame)
# requests_function = CSV.read("locust/logs/output_locust_function_stats.csv",␣
 ↪DataFrame)

# Create the plot
plot(
    timestamps, requests_local,
    label="Local Deployment",
    lw=2, marker=:circle, xlabel="Time (seconds)", ylabel="Requests per Second",
    title="Requests per Second for Various Deployments"
)
plot!(timestamps, requests_vmss, label="VM Scale Set", lw=2, marker=:square)
plot!(timestamps, requests_webapp, label="Web App", lw=2, marker=:triangle)
plot!(timestamps, requests_function, label="Function App", lw=2, marker=:
 ↪diamond)

# Show grid and legend
plot!(grid=true, legend=:topright)
```

```
 Warning: Skipped marker arg triangle.
 @ Plots
~/.julia/packages/Plots/Ec1L1/src/args.jl:1149
```

[6]:



What is the address of the numerical integrap webapp where we can access your site?

Your answer: https://webappclouds2025nibr.azurewebsites.net/

What is the address of the numerical integrap function deployment?

Your answer: https://clouds25lab2eurbrniapp.azurewebsites.net/

What is the address of the mapreduce durable function deployment where can invoke it?

Your answer: https://clouds25brlab2mrapp.azurewebsites.net/

What is the gitlab URL where you have saved your assignment code?

Your answer:

- Source Code for all IaC management

https://github.com/setrar/Clouds/tree/main/Labs/Azure/lab2

- Source Code for Numerical Integration

https://github.com/setrar/CloudsNumericalIntegration

- (attempted) Source Code for MR function

https://github.com/setrar/CloudsMRFunction

NOTE: Unfortunatelly, I wasted a lot of time trying to upload functions where I should have focused using the AZ CLI