TU856/3
INTRODUCTION TO DEVOPS

LAB 8 - GRAFANA AND PROMETHEUS

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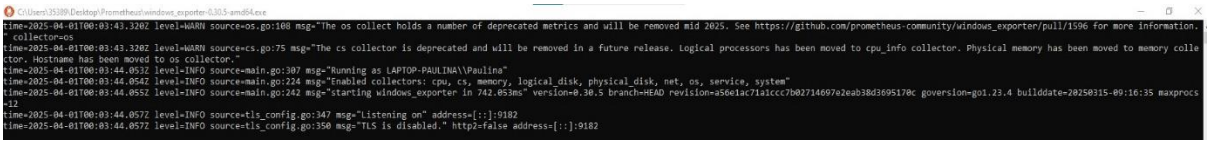
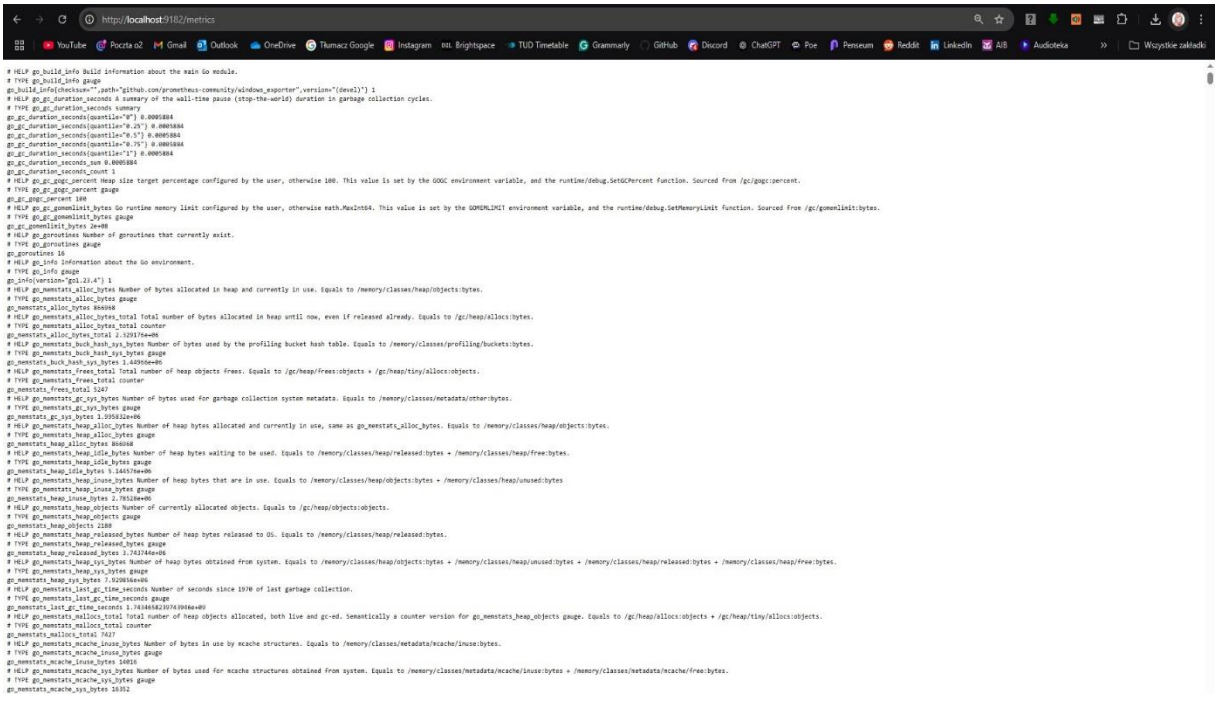
1. WINDOWS EXPORTER METRICS

Terminal showing Windows exporter running with `Listening on address=:9182`.

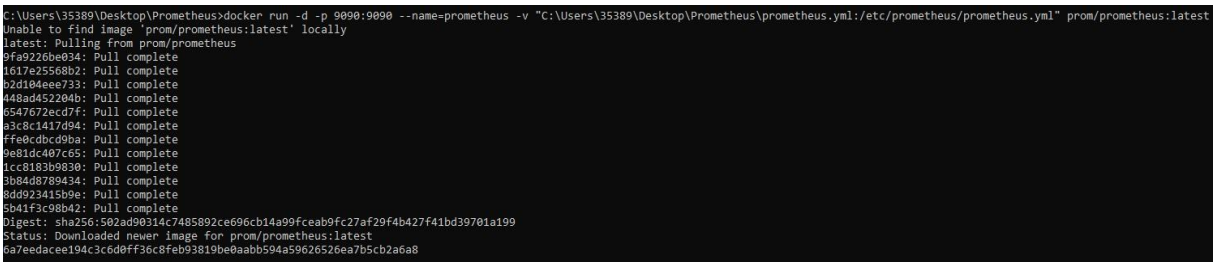


Browser at `http://localhost:9182/metrics` displaying exporter metrics in plaintext.

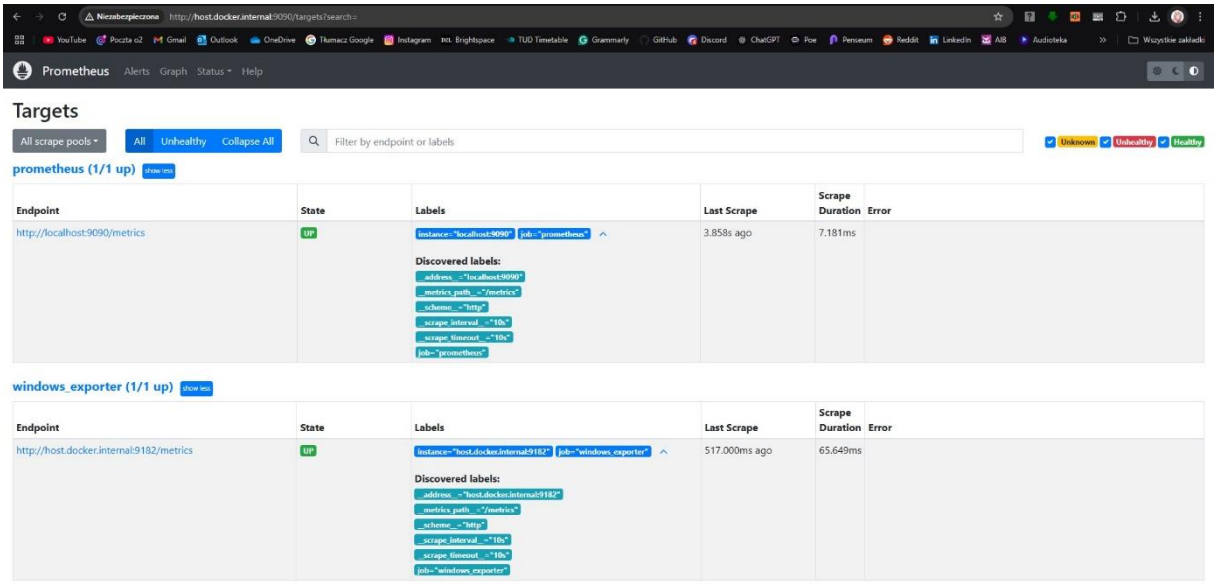


2. PROMETHEUS IN DOCKER

Terminal showing `docker run` command pulling the Prometheus image.

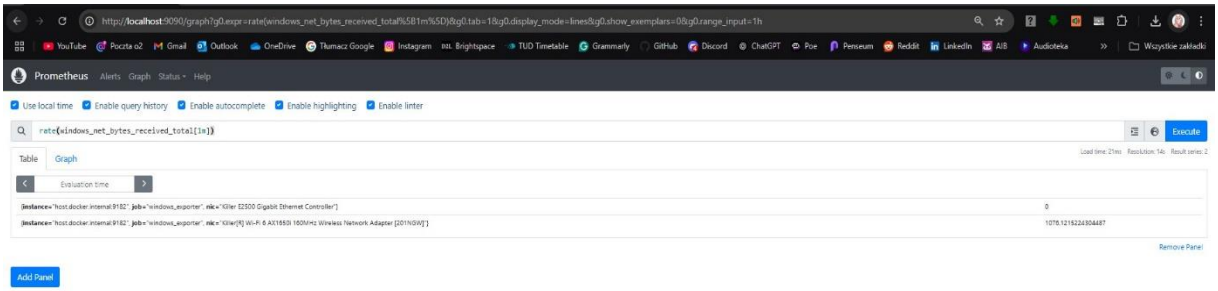


Prometheus Targets page showing both `prometheus` and `windows_exporter` targets are UP.



3. PROMETHEUS QUERY

A Prometheus query for network usage was executed.

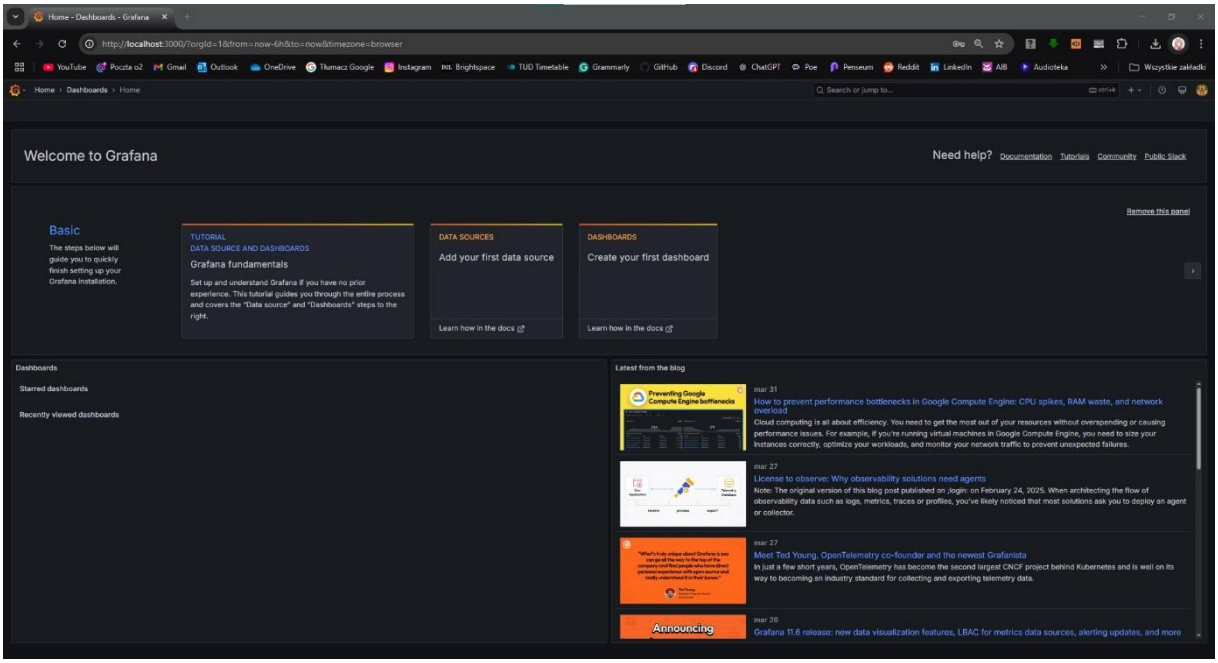


4. GRAFANA RUNNING

Grafana is running in Docker and accessible via `localhost:3000`.

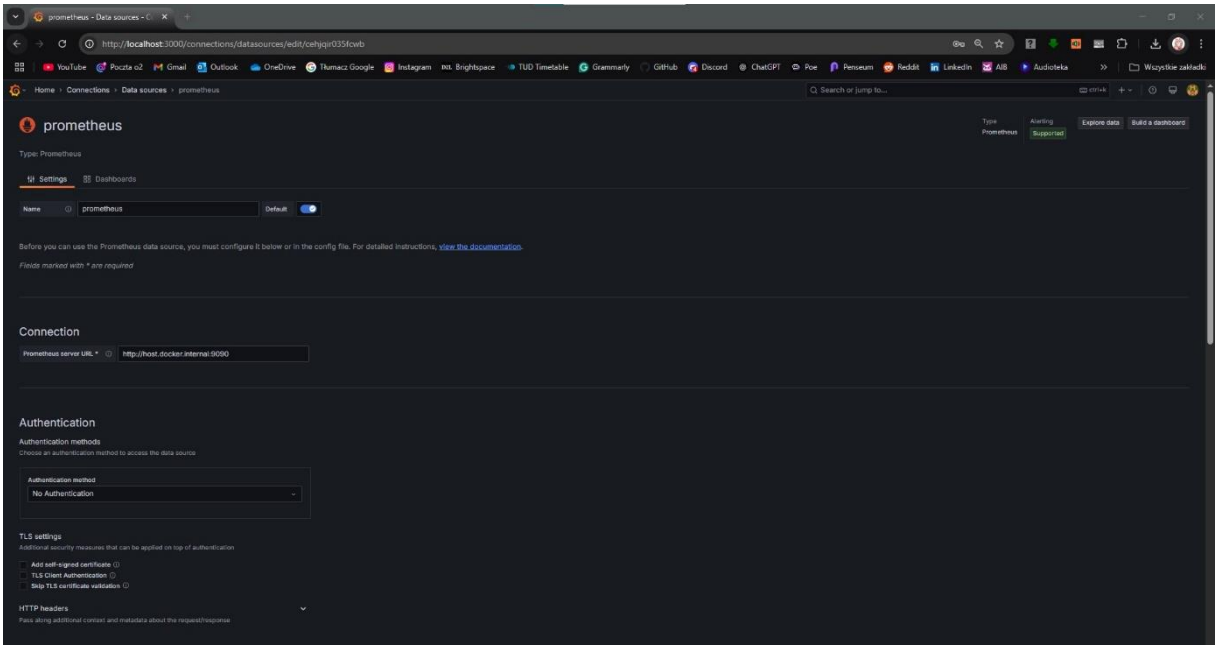
```
C:\Users\35389\Desktop\Prometheus>docker run -d -p 3000:3000 --name=grafana grafana/grafana-oss:latest
Unable to find image 'grafana/grafana-oss:latest' locally
latest: Pulling from grafana/grafana-oss
f18232174bc9: Pull complete
70ca445a67c2: Pull complete
bbb8b5218cfb: Pull complete
2a08a00fe446: Pull complete
5b32a5607528: Pull complete
c0a27b1e2168: Pull complete
ce185550173e: Pull complete
daf4bae1c5dd: Pull complete
b9d78c8c657a: Pull complete
babadc1b811e: Pull complete
Digest: sha256:62d2b9d20a19714ebfe48d1bb405086081bc602aa053e28cf6d73c7537640dfb
Status: Downloaded newer image for grafana/grafana-oss:latest
37efd88be0ae3c8bf0f148f6e47248dc3e033389c5557c2907d9002613761ed3
```

The UI loaded successfully, confirming it’s working.

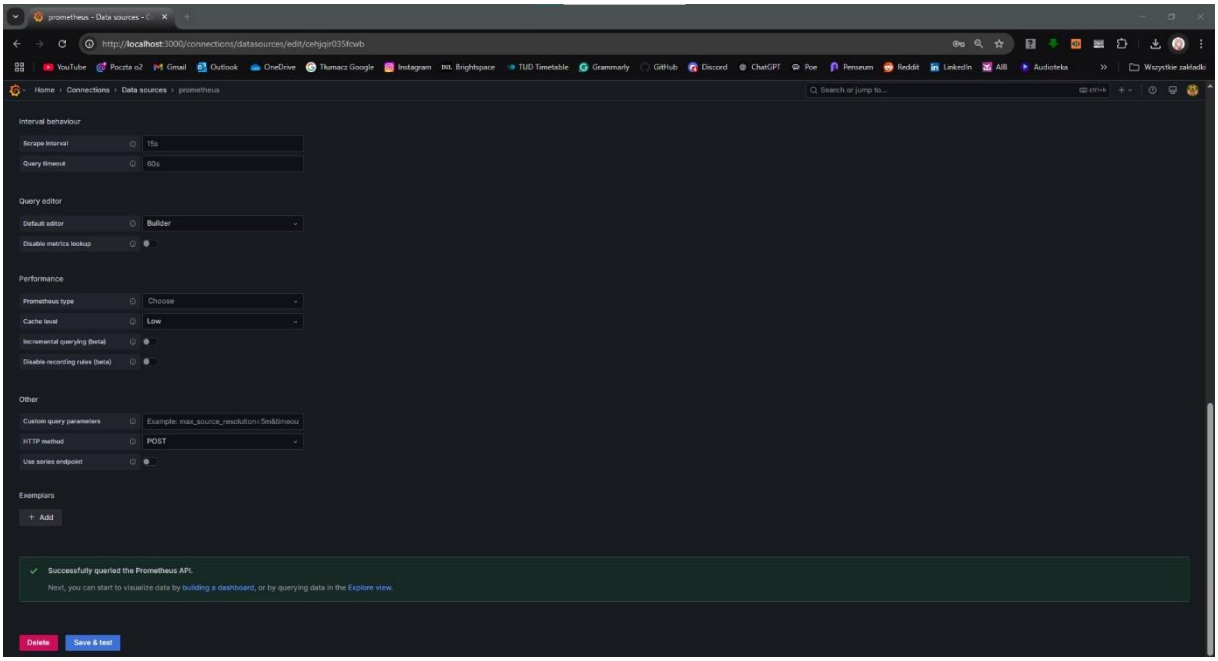


5. ADDING PROMETHEUS AS DATA SOURCE IN GRAFANA

Prometheus was added as a data source in Grafana.

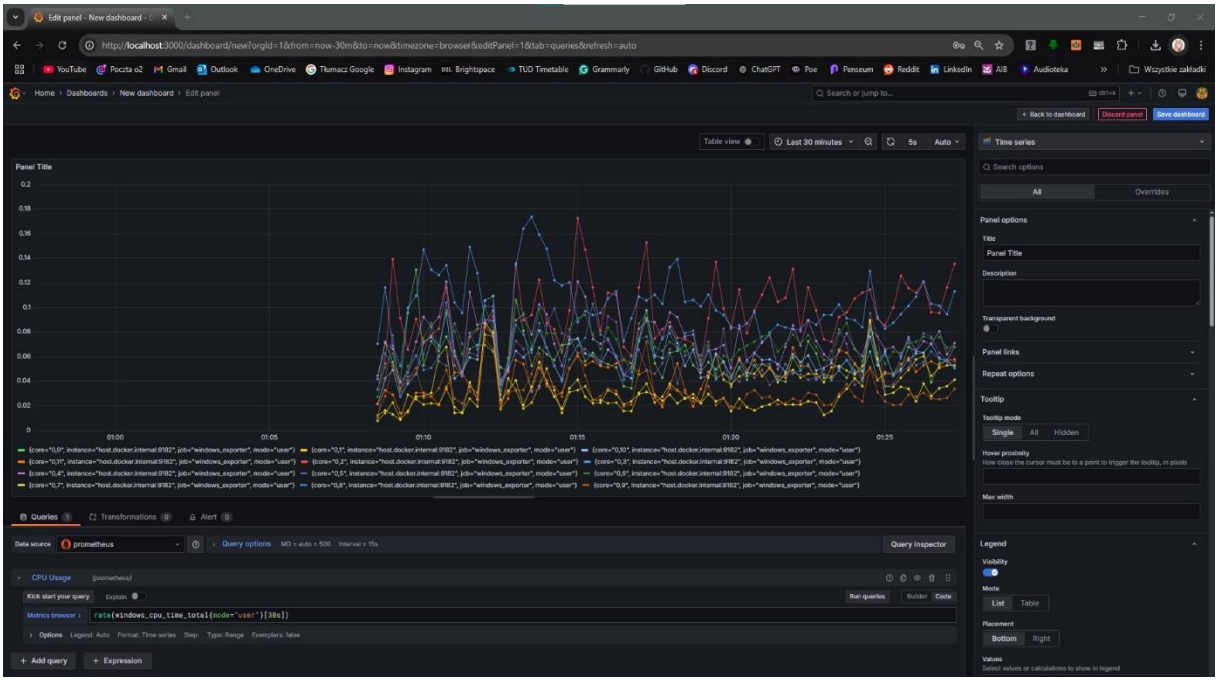


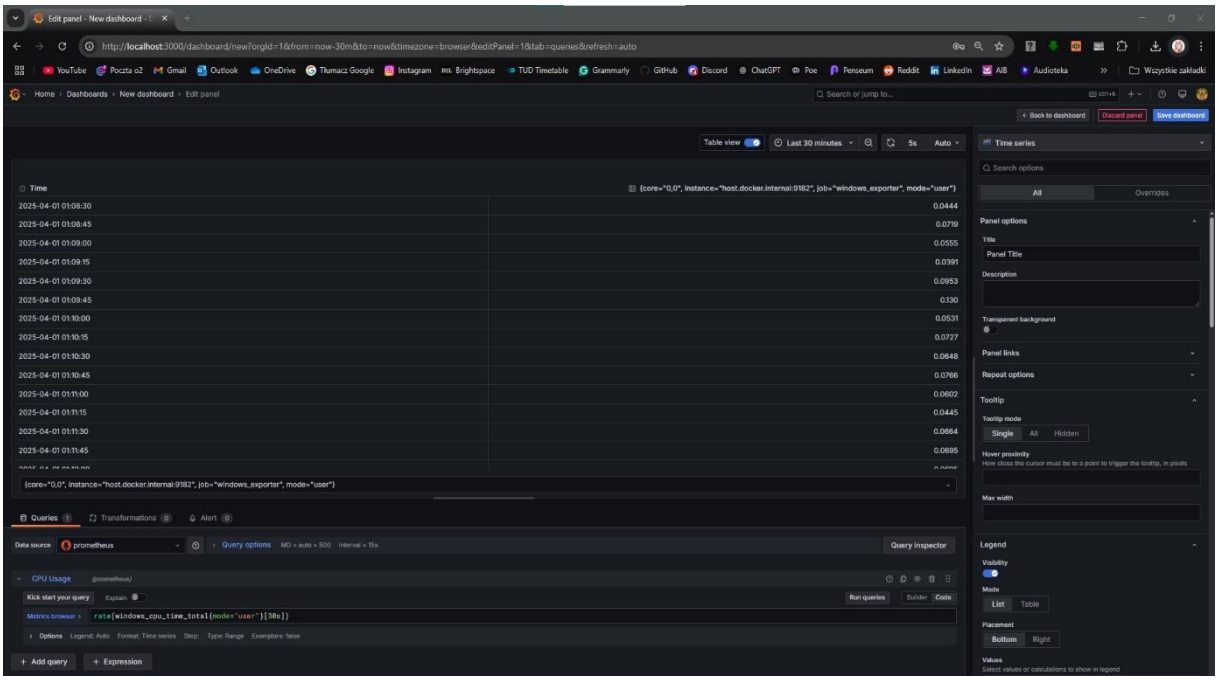
The connection test passed, allowing Grafana to access Prometheus metrics.



6. CPU USAGE GRAPH IN GRAFANA

A CPU usage graph was created in Grafana using PromQL. Auto-refresh is enabled, and live data is displayed correctly.




Edit panel - New dashboard
http://localhost:3000/dashboard/new?orgId=1&from=now-30m&to=now&timezone=browser&editPanel=1&tab=queries&refresh=auto
Home › Dashboards › New dashboard › Edit panel
Back to dashboard
Discard panel
Save dashboard
Table view
Last 30 minutes
5s
Auto
Time
{core="0,0", instance="host.docker.internal:9182", job="windows_exporter", mode="user"}
2025-04-01 01:08:30 0.0444
2025-04-01 01:08:45 0.0719
2025-04-01 01:09:00 0.0555
2025-04-01 01:09:15 0.0391
2025-04-01 01:09:30 0.0953
2025-04-01 01:09:45 0.130
2025-04-01 01:10:00 0.0531
2025-04-01 01:10:15 0.0727
2025-04-01 01:10:30 0.0648
2025-04-01 01:10:45 0.0766
2025-04-01 01:11:00 0.0602
2025-04-01 01:11:15 0.0445
2025-04-01 01:11:30 0.0664
2025-04-01 01:11:45 0.0695
Queries
Transformations
Alert
Data source
prometheus
Query options
Query inspector
CPU Usage
Kick start your query
Run queries
Builder
Code
rate(windows_cpu_time_total{mode='user'}[30s])
Add query
Expression
Time series
Search options
All
Overrides
Panel options
Title
Panel Title
Description
Transparent background
Panel links
Repeat options
Tooltip
Tooltip mode
Single
All
Hidden
Hover proximity
Max width
Legend
Visibility
Mode
List
Table
Placement
Bottom
Right
Values