

EXPLORER ...

> OPEN EDITORS

LAB ASSESSMENT

> ansible

> docker

grafana and Prometheus

> .terraform

.terraform.lock.hcl

\$ ec2-server-userdata.sh

main.tf

\$ prom-graf-userdata.sh

{} terraform.tfstate

terraformer.tfstate.b...

> jenkins

> kubernetes

> terraform

{} terraform.tfstate

grafana and Prometheus > main.tf > resource "aws_instance" "ec2_server" > associate_public_ip_address

```
26   resource "aws_security_group" "ec2_sg" {
27     egress {
28       from_port  = 0
29       to_port    = 0
30       protocol   = "-1"
31       cidr_blocks = ["0.0.0.0/0"]
32     }
33
34     tags = {
35       Name = "ec2-sg"
36     }
37   }
38
39   // EC2 Instance for Prometheus and Grafana
40   resource "aws_instance" "prom_graf" {
41     ami           = "ami-0e8d228ad90af673b" // Ubuntu AMI
42     instance_type = "t2.medium"
43     vpc_security_group_ids = [aws_security_group.ec2_sg.id]
44     key_name      = aws_key_pair.keypair.key_name
45     associate_public_ip_address = true
46     user_data      = templatefile("prom-graf-userdata.sh", {
47       ec2_webserver_ip = aws_instance.ec2_server.public_ip
48     })
49
50     tags = {
51       Name = "prom-graf-server"
52     }
53   }
54
55   // EC2 Instance for General Web Server
56   resource "aws_instance" "ec2_server" {
57     ami           = "ami-0e8d228ad90af673b" // Ubuntu AMI
58     instance_type = "t2.micro"
59     vpc_security_group_ids = [aws_security_group.ec2_sg.id]
60     key_name      = aws_key_pair.keypair.key_name
61   }
62 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

- Reusing previous version of hashicorp/local from the dependency lock file
- Reusing previous version of hashicorp/aws from the dependency lock file
- Using previously-installed hashicorp/tls v4.0.6
- Using previously-installed hashicorp/local v2.5.2
- Using previously-installed hashicorp/aws v5.76.0

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see any changes that are required for your infrastructure. All Terraform commands should now work.

If you ever set or change modules or backend configuration for Terraform, rerun this command to reinitialize your working directory. If you forget, other commands will detect it and remind you to do so if necessary.

mac@SirNicks-MBP grafana and Prometheus % terraform validate
Success! The configuration is valid.

zsh kubern...
zsh kubern...
zsh grafan...

Ln 96, Col 37 Spaces: 2 UTF-8 LF {} Terraform

EXPLORER ⋮ .tf docker 🔒 docker-key.pem 🐳 main.tf kubernetes \$ master-userdata.sh ! deployment.yml 🐳 main.tf grafana and Prometheus X \$ ec2-server-userdata.sh \$ prom-graf-userdata.sh ⋮

grafana and Prometheus > 🐳 main.tf > resource "aws_instance" "ec2_server" > associate_public_ip_address

```
75   resource "aws_instance" "prom_graf" {
76     vpc_security_group_ids = [aws_security_group.ec2_sg.id]
77     key_name               = aws_key_pair.keypair.key_name
78     associate_public_ip_address = true
79     user_data              = templatefile("prom-graf-userdata.sh", {
80       ec2_webserver_ip = aws_instance.ec2_server.public_ip
81     })
82
83   }
84
85   tags = {
86     Name = "prom-graf-server"
87   }
88 }
89
90 // EC2 Instance for General Web Server
91 resource "aws_instance" "ec2_server" {
92   ami           = "ami-0e8d228ad90af673b" // Ubuntu AMI
93   instance_type = "t2.micro"
94   vpc_security_group_ids = [aws_security_group.ec2_sg.id]
95   key_name      = aws_key_pair.keypair.key_name
96   associate_public_ip_address = true
97   user_data     = file("./ec2-server-userdata.sh")
98
99   tags = {
100    Name = "ec2-server"
101  }
102}
103
104// Outputs
105output "prom_graf_ip" {
106  value = aws_instance.prom_graf.public_ip
107}
108
109output "ec2_ip" {
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS + ⋮ ^ X

```
tls_private_key.keypair: Creating...
aws_security_group.ec2_sg: Creating...
tls_private_key.keypair: Creation complete after 2s [id=079f70ce94321d636d3e7a0a72a6ed5242141443]
aws_key_pair.keypair: Creating...
local_file.private_key: Creating...
local_file.private_key: Creation complete after 0s [id=f9d88236459de1ef929511c369e3f23b6e0cca5f]
aws_key_pair.keypair: Creation complete after 2s [id=pros-keypair]
aws_security_group.ec2_sg: Creation complete after 7s [id=sg-054608aa555c1dcraf]
aws_instance.ec2_server: Creating...
aws_instance.ec2_server: Still creating... [10s elapsed]
aws_instance.ec2_server: Creation complete after 16s [id=i-0ebd4fb6b2d86473f]
aws_instance.prom_graf: Creating...
aws_instance.prom_graf: Still creating... [10s elapsed]
aws_instance.prom_graf: Creation complete after 16s [id=i-062d4f9f7bb89e5a0]
```

Apply complete! Resources: 6 added, 0 changed, 0 destroyed.

Outputs:

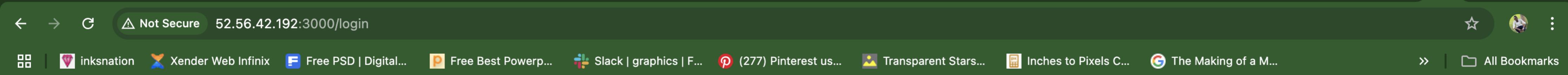
```
ec2_ip = "35.179.107.30"
prom_graf_ip = "52.56.42.192"
```

mac@SirNicks-MBP grafana and Prometheus %

A screenshot of a Prometheus query interface in a browser. The URL is 52.56.42.192:9090/graph?g0.expr=&g0.tab=1&g0.stacked=0&g0.show_exemplars=0&g0.range_input=1h. The interface includes a navigation bar with icons for various services, a top header with a star icon and user profile, and a main panel for executing Prometheus queries.

The main panel has the following components:

- Configuration:** Options for "Use local time" (unchecked), "Enable query history" (unchecked), "Enable autocomplete" (checked), "Enable highlighting" (checked), and "Enable linter" (checked).
- Search Bar:** An input field labeled "Expression (press Shift+Enter for newlines)" with a magnifying glass icon, and a "Execute" button.
- View Selection:** Buttons for "Table" (selected) and "Graph".
- Evaluation Time Range:** A slider labeled "Evaluation time" with arrows for navigating between time points.
- Data Result:** A box displaying the message "No data queried yet".
- Panel Management:** A "Remove Panel" link and a "Add Panel" button.



A Not Secure 52.56.42.192:9090/targets?search=

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All Bookmarks

Prometheus Alerts Graph Status Help

Targets

All scrape pools ▾ All Unhealthy Collapse All Filter by endpoint or labels Unknown Unhealthy Healthy

ec2-node-exporter (1/1 up) [show less](#)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://35.179.107.30:9100/metrics	UP	instance="35.179.107.30:9100" job="ec2-node-exporter"	10.630s ago	10.365ms	

prometheus (1/1 up) [show less](#)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9100/metrics	UP	instance="localhost:9100" job="prometheus"	2.427s ago	10.902ms	

Lab Assesment

Not Secure 52.56.42.192:9090/co

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Prometheus Alerts Graph Status

Configuration

Copy to clipboard

```
global:
  scrape_interval: 15s
  scrape_timeout: 10s
  evaluation_interval: 1m
  external_labels:
    monitor: prometheus
scrape_configs:
- job_name: prometheus
  honor_timestamps: true
  scrape_interval: 15s
  scrape_timeout: 10s
  metrics_path: /metrics
  scheme: http
  follow_redirects: true
  enable_http2: true
  static_configs:
    - targets:
        - localhost:9100
- job_name: ec2-node-exporter
  honor_timestamps: true
  scrape_interval: 15s
  scrape_timeout: 10s
  metrics_path: /metrics
  scheme: http
  follow_redirects: true
  enable_http2: true
  static_configs:
    - targets:
        - 35.179.107.30:9100
```

EXPLORER

OPEN EDITORS

LAB AS... > ansible > docker > grafana and Prometheus > .terraform > .terraform.lock.hcl \$ ec2-server-userdata.sh \$ main.tf

grafana and Prometheus > \$ prom-graf-userdata.sh

```
56
57 # create prometheus config file
58 sudo cat <<EOT> /etc/prometheus/prometheus.yml
59 global:
60   scrape_interval: 15s
61   external_labels:
62     monitor: 'prometheus'
63
64 scrape_configs:
65   - job_name: 'prometheus'
66     static_configs:
67       - targets: ['localhost:9100']
68
69   - job_name: 'ec2-node-exporter'
70     static_configs:
71       - targets: ['$ec2_webserver_ip:9100']
72 EOT
73
74 sudo systemctl daemon-reload
75 sudo systemctl enable prometheus
76 sudo systemctl start prometheus
77
78 # create node exporter user
79 sudo useradd --no-create-home node_exporter
80
81 # download node_exporter tar file
82 wget https://github.com/prometheus/node_exporter/releases/download/v1.6.1/node_exporter-1.6.1.linux-amd64.tar.gz
83 tar xzf node_exporter-1.6.1.linux-amd64.tar.gz
84 sudo cp node_exporter-1.6.1.linux-amd64/node_exporter /usr/local/bin/node_exporter
85 rm -rf node_exporter-1.6.1.linux_amd64.tar.gz node_exporter-1.6.1.linux_amd64
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
tls_private_key.keypair: Creating...
aws_security_group.ec2_sg: Creating...
tls_private_key.keypair: Creation complete after 2s [id=079f70ce94321d636d3e7a0a72a6ed5242141443]
aws_key_pair.keypair: Creating...
local_file.private_key: Creating...
local_file.private_key: Creation complete after 0s [id=f9d88236459delef929511c369e3f23b6e0cca5f]
aws_key_pair.keypair: Creation complete after 2s [id=pros-keypair]
aws_security_group.ec2_sg: Creation complete after 7s [id=sg-054608aa555c1dcaf]
aws_instance.ec2_server: Creating...
aws_instance.ec2_server: Still creating... [10s elapsed]
aws_instance.ec2_server: Creation complete after 16s [id=i-0ebd4fb6b2d86473f]
aws_instance.prom_graf: Creating...
aws_instance.prom_graf: Still creating... [10s elapsed]
aws_instance.prom_graf: Creation complete after 16s [id=i-062d4f9f7bb89e5a0]
```

Apply complete! Resources: 6 added, 0 changed, 0 destroyed.

Outputs:

```
ec2_ip = "35.179.107.30"
prom_graf_ip = "52.56.42.192"
mac@SirNicks-MBP grafana and Prometheus %
```

M | G | C | F | T | P | A | X | S | I | D | O | R | L | H | V | B | G | P | Y | M | J | PDF | +

Not Secure 35.179.107.30:9100/metrics

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All Bookmarks

```
# HELP go_gc_duration_seconds A summary of the pause duration of garbage collection cycles.
# TYPE go_gc_duration_seconds summary
go_gc_duration_seconds{quantile="0"} 1.8536e-05
go_gc_duration_seconds{quantile="0.25"} 2.7889e-05
go_gc_duration_seconds{quantile="0.5"} 2.8575e-05
go_gc_duration_seconds{quantile="0.75"} 5.0634e-05
go_gc_duration_seconds{quantile="1"} 0.000333185
go_gc_duration_seconds_sum 0.00205057
go_gc_duration_seconds_count 49
# HELP go_goroutines Number of goroutines that currently exist.
# TYPE go_goroutines gauge
go_goroutines 9
# HELP go_info Information about the Go environment.
# TYPE go_info gauge
go_info{version="go1.20.6"} 1
# HELP go_memstats_alloc_bytes Number of bytes allocated and still in use.
# TYPE go_memstats_alloc_bytes gauge
go_memstats_alloc_bytes 2.12576e+06
# HELP go_memstats_alloc_bytes_total Total number of bytes allocated, even if freed.
# TYPE go_memstats_alloc_bytes_total counter
go_memstats_alloc_bytes_total 9.1960016e+07
# HELP go_memstats_buck_hash_sys_bytes Number of bytes used by the profiling bucket hash table.
# TYPE go_memstats_buck_hash_sys_bytes gauge
go_memstats_buck_hash_sys_bytes 1.475824e+06
# HELP go_memstats_frees_total Total number of frees.
# TYPE go_memstats_frees_total counter
go_memstats_frees_total 1.115466e+06
# HELP go_memstats_gc_sys_bytes Number of bytes used for garbage collection system metadata.
# TYPE go_memstats_gc_sys_bytes gauge
go_memstats_gc_sys_bytes 8.408432e+06
# HELP go_memstats_heap_alloc_bytes Number of heap bytes allocated and still in use.
# TYPE go_memstats_heap_alloc_bytes gauge
go_memstats_heap_alloc_bytes 2.12576e+06
# HELP go_memstats_heap_idle_bytes Number of heap bytes waiting to be used.
# TYPE go_memstats_heap_idle_bytes gauge
go_memstats_heap_idle_bytes 4.333568e+06
# HELP go_memstats_heap_inuse_bytes Number of heap bytes that are in use.
# TYPE go_memstats_heap_inuse_bytes gauge
go_memstats_heap_inuse_bytes 3.661824e+06
# HELP go_memstats_heap_objects Number of allocated objects.
# TYPE go_memstats_heap_objects gauge
go_memstats_heap_objects 12472
# HELP go_memstats_heap_released_bytes Number of heap bytes released to OS.
# TYPE go_memstats_heap_released_bytes gauge
go_memstats_heap_released_bytes 3.11296e+06
# HELP go_memstats_heap_sys_bytes Number of heap bytes obtained from system.
# TYPE go_memstats_heap_sys_bytes gauge
go_memstats_heap_sys_bytes 7.995392e+06
# HELP go_memstats_last_gc_time_seconds Number of seconds since 1970 of last garbage collection.
# TYPE go_memstats_last_gc_time_seconds gauge
go_memstats_last_gc_time_seconds 1.7327908334784281e+09
# HELP go_memstats_lookups_total Total number of pointer lookups.
# TYPE go_memstats_lookups_total counter
go_memstats_lookups_total 0
# HELP go_memstats_mallocs_total Total number of mallocs.
# TYPE go_memstats_mallocs_total counter
go_memstats_mallocs_total 1.127938e+06
# HELP go_memstats_mcache_inuse_bytes Number of bytes in use by mcache structures.
# TYPE go_memstats_mcache_inuse_bytes gauge
go_memstats_mcache_inuse_bytes 1200
# HELP go_memstats_mcache_sys_bytes Number of bytes used for mcache structures obtained from system.
```

A Not Secure 52.56.42.192:3000/?orgId=1&from=now-6h&to=now&timezone=browser To exit full screen, press and hold esc

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+ | ? | All Bookmarks

Home

Home Bookmarks Starred Dashboards Explore Alerting Connections Administration

Welcome to Grafana

Need help? Documentation Tutorials Community Public Slack Remove this panel

Basic
The steps below will guide you to quickly finish setting up your Grafana installation.

TUTORIAL
DATA SOURCE AND DASHBOARDS
Grafana fundamentals
Set up and understand Grafana if you have no prior experience. This tutorial guides you through the entire process and covers the "Data source" and "Dashboards" steps to the right.

DATA SOURCES
Add your first data source Learn how in the docs

DASHBOARDS
Create your first dashboard Learn how in the docs

Dashboards

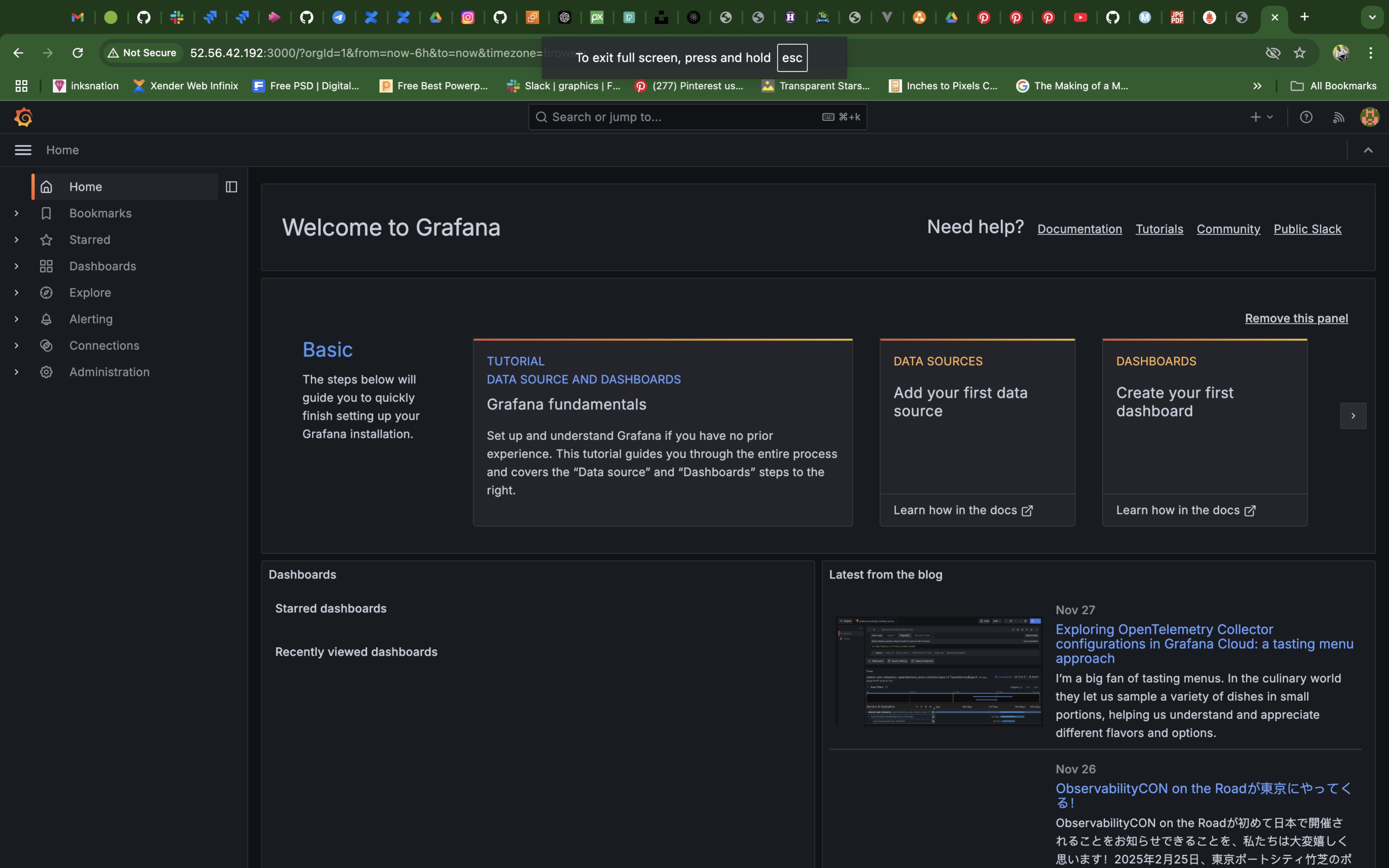
Starred dashboards

Recently viewed dashboards

Latest from the blog

Nov 27 Exploring OpenTelemetry Collector configurations in Grafana Cloud: a tasting menu approach
I'm a big fan of tasting menus. In the culinary world they let us sample a variety of dishes in small portions, helping us understand and appreciate different flavors and options.

Nov 26 ObservabilityCON on the Roadが東京にやってくる!
ObservabilityCON on the Roadが初めて日本で開催されることをお知らせできることを、私たちは大変嬉しく思います! 2025年2月25日、東京ポートシティ竹芝のボ



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Home > Connections > Data sources > Add data source

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Add data source

Choose a data source type

Filter by name or type

Cancel

Time series databases

Prometheus
Open source time series database & alerting
Core

Graphite
Open source time series database
Core

InfluxDB
Open source time series database
Core

OpenTSDB
Open source time series database
Core

Logging & document databases

Loki
Like Prometheus but for logs. OSS logging solution from Grafana Labs
Core

Elasticsearch
Open source logging & analytics database

A Not Secure 52.56.42.192:3000/connections/datasources/edit/fe5auo18ahxxca

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Home > Connections > Data sources > prometheus

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prometheus

Type: Prometheus

Settings Dashboards

Configure your Prometheus data source below
Or skip the effort and get Prometheus (and Loki) as fully-managed, scalable, and hosted data sources from Grafana Labs with the free-forever Grafana Cloud plan.

Name: prometheus Default:

Before you can use the Prometheus data source, you must configure it below or in the config file. For detailed instructions, [view the documentation](#).

Fields marked with * are required

Connection

Prometheus server URL *

Authentication

Authentication methods
Choose an authentication method to access the data source

Explore data Build a dashboard

A Not Secure 52.56.42.192:3000/connections/datasources/edit/fe5auo18ahxxca

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Default editor Builder

Disable metrics lookup

Performance

Prometheus type Choose Cache level Low Incremental querying (beta)

Disable recording rules (beta)

Other

Custom query parameters Example: max_source_resolution=5m&timeout=10s HTTP method POST

Exemplars + Add

✓ Successfully queried the Prometheus API.

Next, you can start to visualize data by building a dashboard, or by querying data in the Explore view.

Delete Save & test

A Not Secure 52.56.42.192:3000/dashboards

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Home > Dashboards

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New ^

New dashboard New folder Import

Search for dashboards and folders Filter by tag Starred

Dashboard

Create and manage dashboards to visualize your data

Q Search for dashboards and folders

Filter by tag Starred

Sort

You haven't created any dashboards yet

+ Create dashboard



52.56.42.192:3000/dashboard/import

A horizontal bar at the top contains various icons and links, including Google Drive, Xender Web Infinix, Free PSD | Digital..., Slack | graphics | F..., (277) Pinterest us..., Transparent Stars..., Inches to Pixels C..., The Making of a M..., JPG PDF, and a logo for a company starting with 'M'.

The main header bar has a back/forward button, a search bar with the URL grafana.com/grafana/dashboards/, and a user profile icon.

The navigation menu includes links for [Grafana Labs](#), [Products](#), [Open Source](#), [Solutions](#), [Learn](#), [Docs](#), [Company](#), [Contact us](#), and [Sign in](#).

Filters:

Data Source: A dropdown menu set to "All".

Panel: A dropdown menu set to "All".

Collector Types: A dropdown menu set to "All".

Sort by: A dropdown menu set to "Downloads".

Category: A dropdown menu set to "All".

Checkboxes: A checked checkbox labeled "Dashboards with screenshots".

Search bar: A search bar with placeholder text "Search dashboards".

Dashboard Grid (8x2 grid):

- Prometheus Node Exporter Full**: A dashboard showing CPU, memory, and disk metrics for multiple nodes.
- Prometheus Istio Control Plane Dashboard**: A dashboard monitoring Istio's control plane metrics.
- Prometheus RabbitMQ-Overview**: A dashboard providing an overview of RabbitMQ clusters.
- Prometheus ArgoCD**: A dashboard for monitoring ArgoCD application delivery.
- Prometheus RabbitMQ-Quorum-Queues-Raft**: A dashboard for monitoring RabbitMQ Quorum Queues and Raft consensus.
- Prometheus CoreDNS**: A dashboard for monitoring CoreDNS service discovery.
- Prometheus Erlang-Memory-Allocators**: A dashboard for monitoring Erlang memory allocators.
- Prometheus Erlang-Distribution**: A dashboard for monitoring Erlang distribution metrics.
- Prometheus Erlang-Distributions-Compare**: A dashboard comparing Erlang distribution metrics across different nodes.

Share your dashboards: A section encouraging users to share their dashboards.

Text: "Export any dashboard from Grafana 3.1 or greater and share your creations with the community."

Button: A blue button labeled "Upload from user portal".

Page Footer: The URL <https://grafana.com/grafana/dashboards/1860-node-exporter-full/>

A screenshot of a web browser showing the Grafana dashboard for the "Node Exporter Full" template. The dashboard displays various metrics for a Linux system, including CPU usage, memory usage, network traffic, and disk space. The interface includes several cards with gauge charts and time-series graphs.

The browser's address bar shows the URL: grafana.com/grafana/dashboards/1860-node-exporter-full/. The page title is "Node Exporter Full".

The dashboard features a sidebar with navigation links such as "All dashboards", "EN", and "Sign in". A central panel shows a complex monitoring interface with multiple panels for CPU, Memory, Network, and Disk metrics. Below this, there are two smaller preview panels showing different configurations of the dashboard.

Text at the bottom left of the main content area reads: "Nearly all default values exported by Prometheus node exporter graphed. Only requires the default job_name: node, add as many targets as you need in '/etc/prometheus/prometheus.yml'." A code snippet for the configuration file is provided:

```
- job_name: node
  static_configs:
```

To the right of the main content, there are two dark-themed callout boxes. The top one is titled "Linux Server" and describes Grafana Labs' solution for monitoring Linux. It includes a "Learn more" button. The bottom one is titled "Get this dashboard" and provides steps to sign up for Grafana Cloud and import the dashboard template, with "Create free account" and "Copy ID to clipboard" buttons.

A Not Secure 52.56.42.192:3000/dashboard/import

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Home > Dashboards > Import dashboard

Home Bookmarks Starred Dashboards Explore Alerting Connections Add new connection Data sources Administration

Import dashboard

Import dashboard from file or Grafana.com

Importing dashboard from Grafana.com

Published by rfmoz Updated on 2024-05-22 17:07:35

Options

Name Node Exporter Full

Folder Dashboards

Unique identifier (UID)
The unique identifier (UID) of a dashboard can be used for uniquely identify a dashboard between multiple Grafana installs. The UID allows having consistent URLs for accessing dashboards so changing the title of a dashboard will not break any bookmarked links to that dashboard.

rYdddIPWk Change uid

Prometheus prometheus

Import Cancel

