

What is Monitoring?



Monitoring in DevOps?

1. Frequent deployments
2. Adoption of microservices
3. Containerization
4. Too many moving parts
5. Hybrid Infrastructure



Pillars of Monitoring



Data Collection



Data Aggregation



Data Visualization



Alerts & Notifications



Data Exportation

Data Collection → Pull and Push based Monitoring System

Data Visualization → Data driven document tool

Popular Monitoring Tools

solarwinds

ZABBIX

Prometheus



Nagios

splunk

APPDYNAMICS



DATADOG

Typical Monitoring Tools:

Prometheus

1. Time Series Backend
2. Flexible Query Language
3. Data Collection via Pull over HTTP
4. Graphing and dashboarding Support
5. Target Discovered via Service Discovery & Statically



Service Discovery: Eureka acts as a register. Any new servers will be registered.

Grafana

1. Rich Dashboard UI
2. Extensive Alerts & Notifications
3. Built-in Query Editor
4. Dashboard Hub for templates
5. Multiple Datasource support



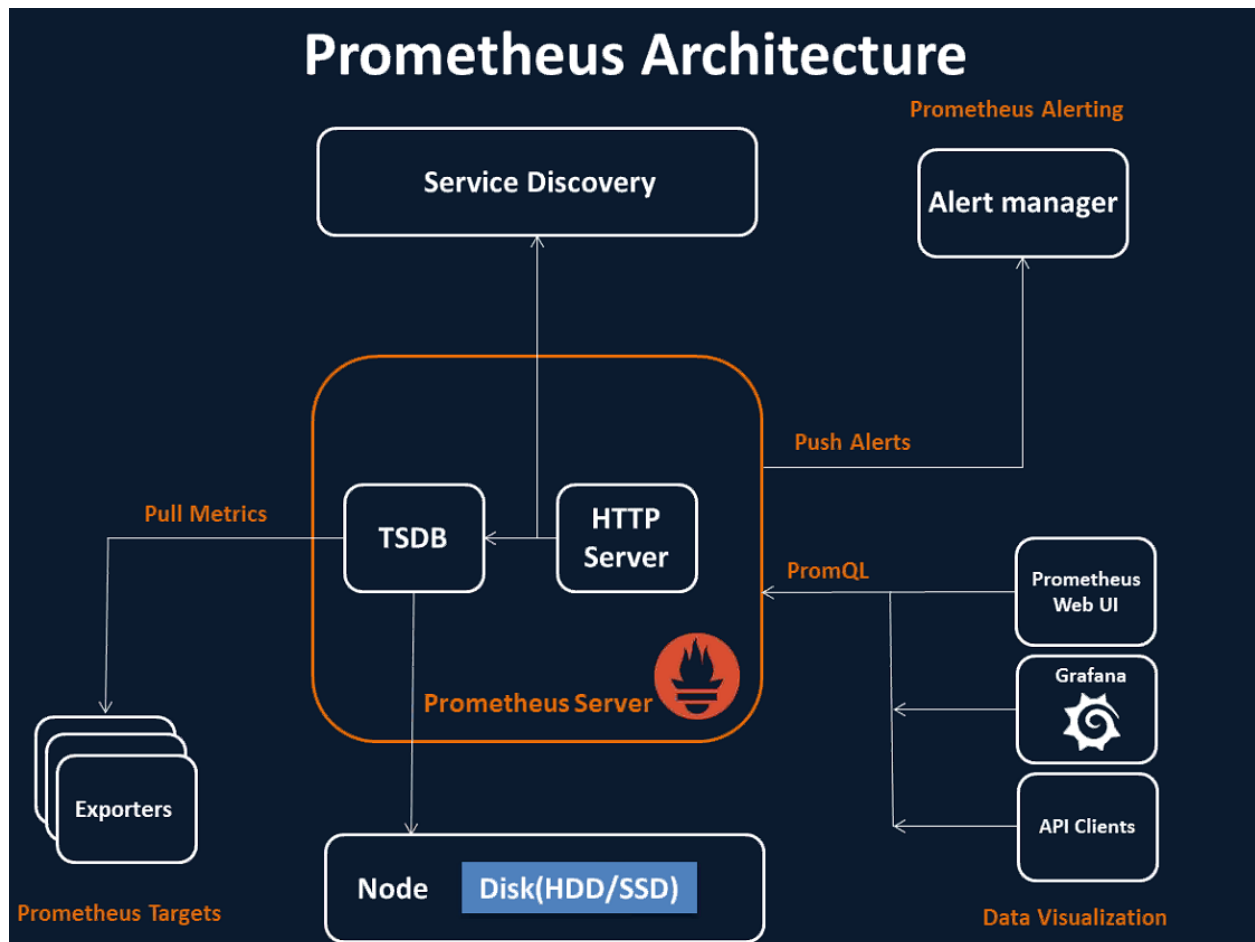
Prometheus for Windows:

<https://github.com/prometheus/prometheus/releases/download/v2.3.2/prometheus-2.3.2.windows-amd64.tar.gz>

Grafana for windows: <https://s3-us-west-2.amazonaws.com/grafana-releases/release/grafana-5.2.3.windows-amd64.zip>

WMI exporter:

https://github.com/martinlindhe/wmi_exporter/releases/download/v0.4.3/wmi_exporter-0.4.3-386.msi

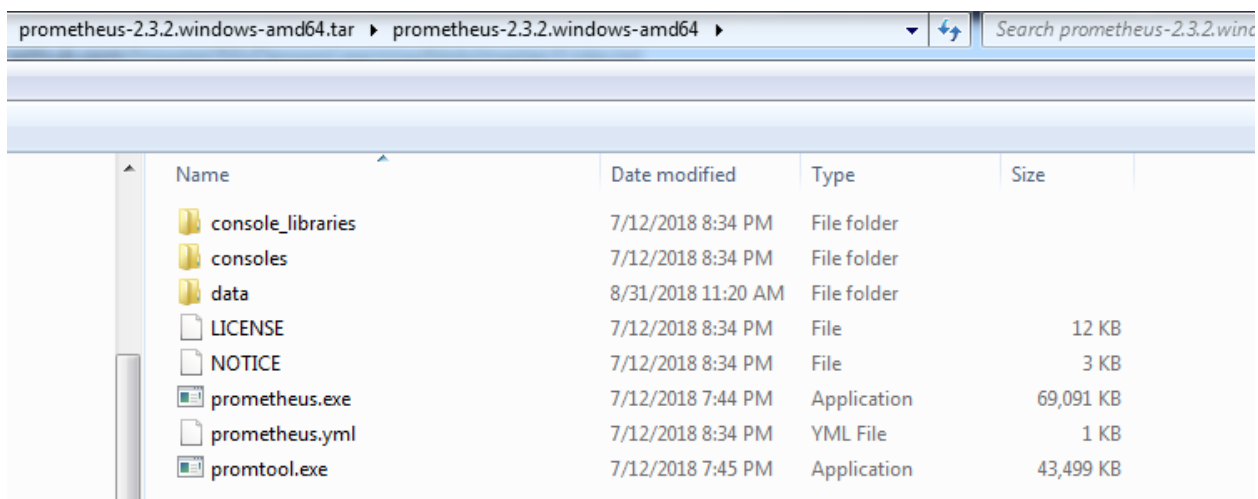


TSDB : Time Series DataBase

Prometheus Installation

1. Download and extract the Prometheus file
2. Open the extracted folder
3. Hold the shift key and click "File → Open command window here"
4. Type `prometheus.exe` in the command window
5. Open your browser and type "`localhost:9090`" and enter

Link: <https://github.com/prometheus/prometheus/releases/download/v2.3.2/prometheus-2.3.2.windows-amd64.tar.gz>



Name	Date modified	Type	Size
console Libraries	7/12/2018 8:34 PM	File folder	
consoles	7/12/2018 8:34 PM	File folder	
data	8/31/2018 11:20 AM	File folder	
LICENSE	7/12/2018 8:34 PM	File	12 KB
NOTICE	7/12/2018 8:34 PM	File	3 KB
prometheus.exe	7/12/2018 7:44 PM	Application	69,091 KB
prometheus.yml	7/12/2018 8:34 PM	YML File	1 KB
promtool.exe	7/12/2018 7:45 PM	Application	43,499 KB

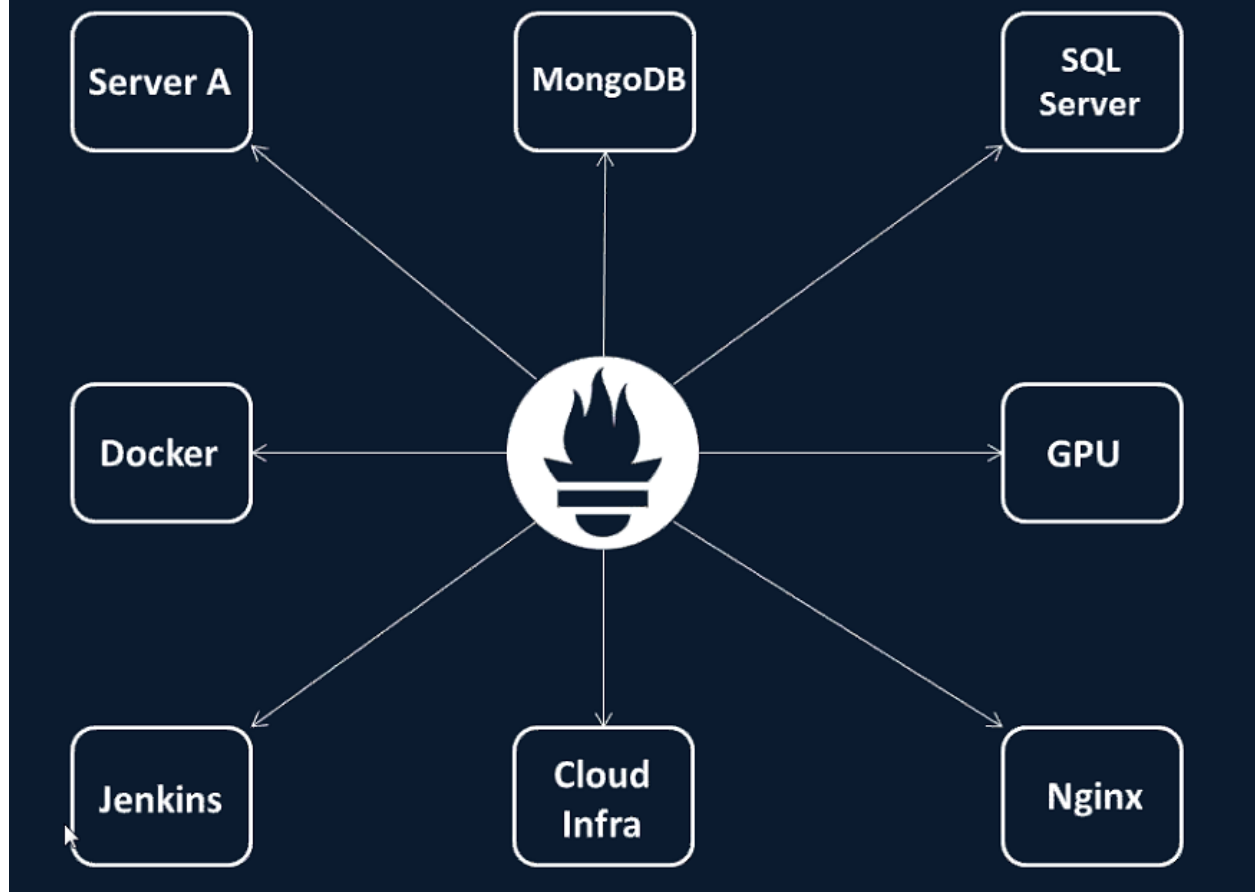
Execute the Prometheus.exe

Default port: 9090

It can be changed from `prometheus.yml`

Exporter does dedicated job for dedicated server

What are Exporters?



A application i.e. being monitored or required to be monitored is target

Wmi exporter:

wmi_exporter-0.4.3-386.msi

https://github.com/martinlindhe/wmi_exporter/releases/download/v0.4.3/wmi_exporter-0.4.3-386.msi

Default Port: 9182

Edit the Prometheus.yml file to configure exporter.

To configure the WMI exporter in prometheus

```

scrape_configs:
  # The job name is added as a label `job=<job_name>` to
  - job_name: 'prometheus'

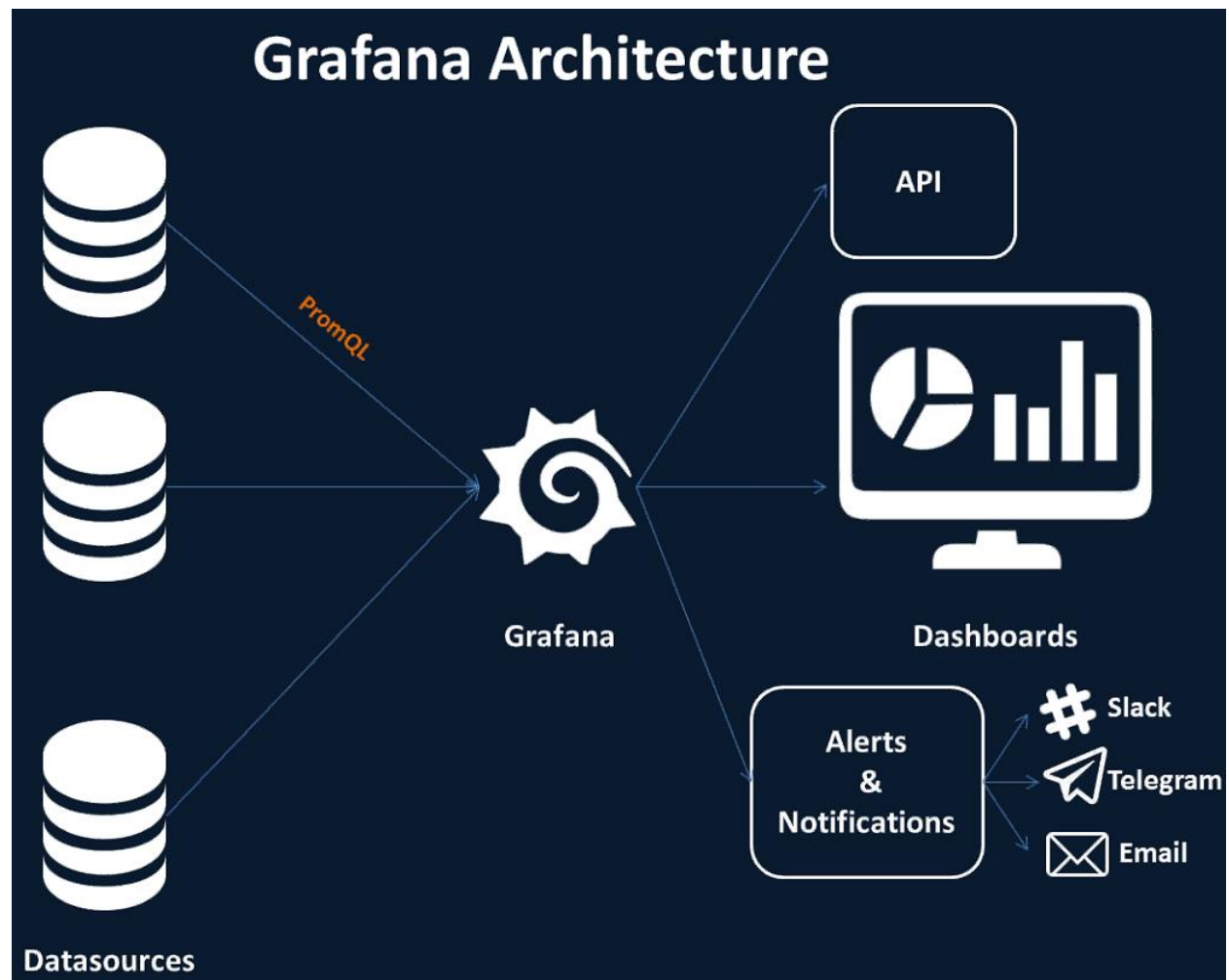
    # metrics_path defaults to '/metrics'
    # scheme defaults to 'http'.





    static_configs:
      - targets: ['localhost:9090']
      - job_name: 'windowsNode'

        # metrics_path defaults to '/metrics'
        # scheme defaults to 'http'.

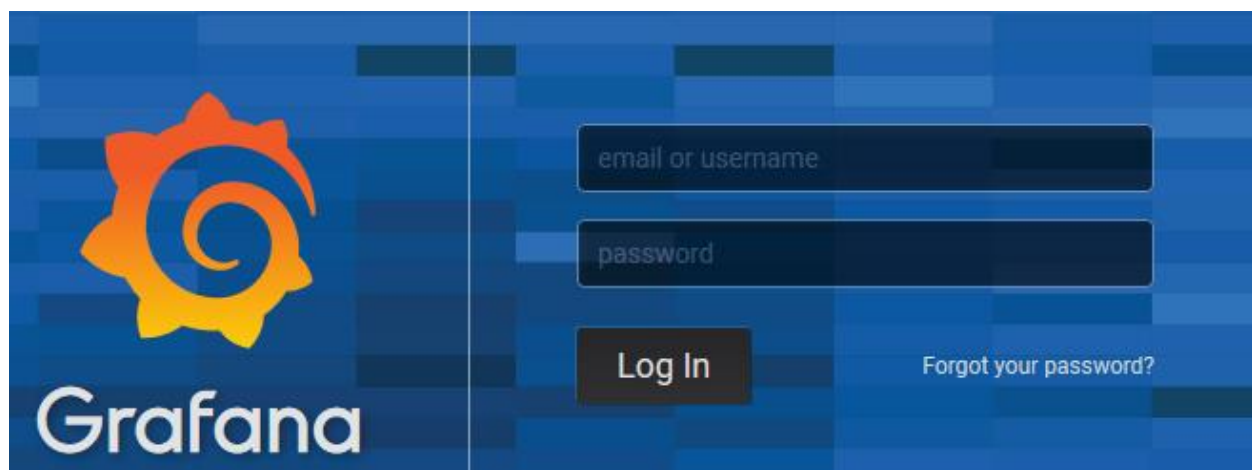
        static_configs:
          - targets: ['localhost:9182']

```



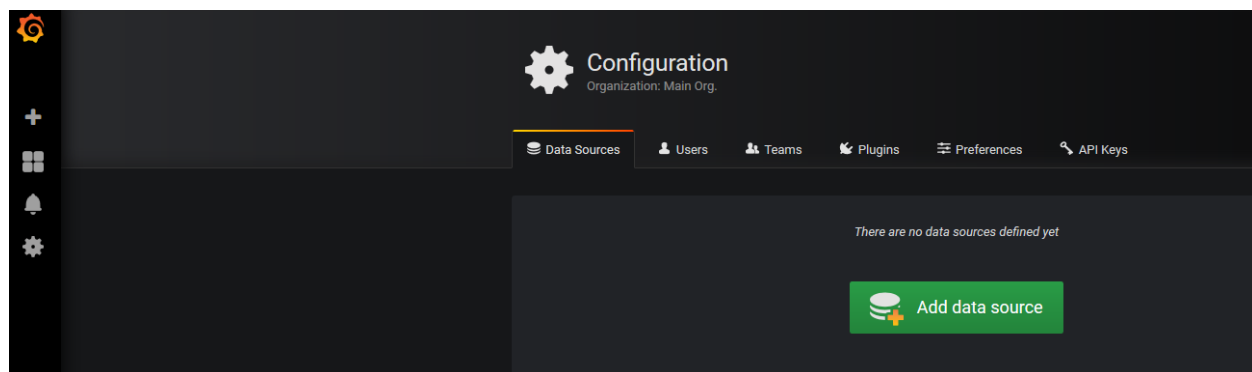
grafana-5.2.3.windows-amd64 ▸ grafana-5.2.3 ▸ bin				Search bin
Name	Date modified	Type	Size	
 grafana-cli.exe	8/22/2018 8:27 AM	Application	17,787 KB	
 grafana-cli.exe.md5	8/22/2018 8:27 AM	MD5 File	1 KB	
 grafana-server.exe	8/22/2018 8:27 AM	Application	32,313 KB	
 grafana-server.exe.md5	8/22/2018 8:27 AM	MD5 File	1 KB	

grafana-server.exe



Default Credentials: **admin/admin**

Go to Add



To connect Grafana with Prometheus



Data Sources / PromWin

Type: Prometheus

Settings

Dashboards

Name	PromWin ⓘ	Default <input type="checkbox"/>
Type	Prometheus ▼	

HTTP

URL	http://localhost:9090 ⓘ	
Access	Server (Default) ▼	Help ▶

Auth

Basic Auth	<input type="checkbox"/>	With Credentials ⓘ	<input type="checkbox"/>
TLS Client Auth	<input type="checkbox"/>	With CA Cert ⓘ	<input type="checkbox"/>

Skip TLS Verification (Insecure)	<input type="checkbox"/>
----------------------------------	--------------------------

Advanced HTTP Settings

Whitelisted Cookies	Add Name ⓘ
---------------------	-------------------------

Scrape interval	15s ⓘ
Query timeout	60s ⓘ
HTTP Method	GET ▼ ⓘ



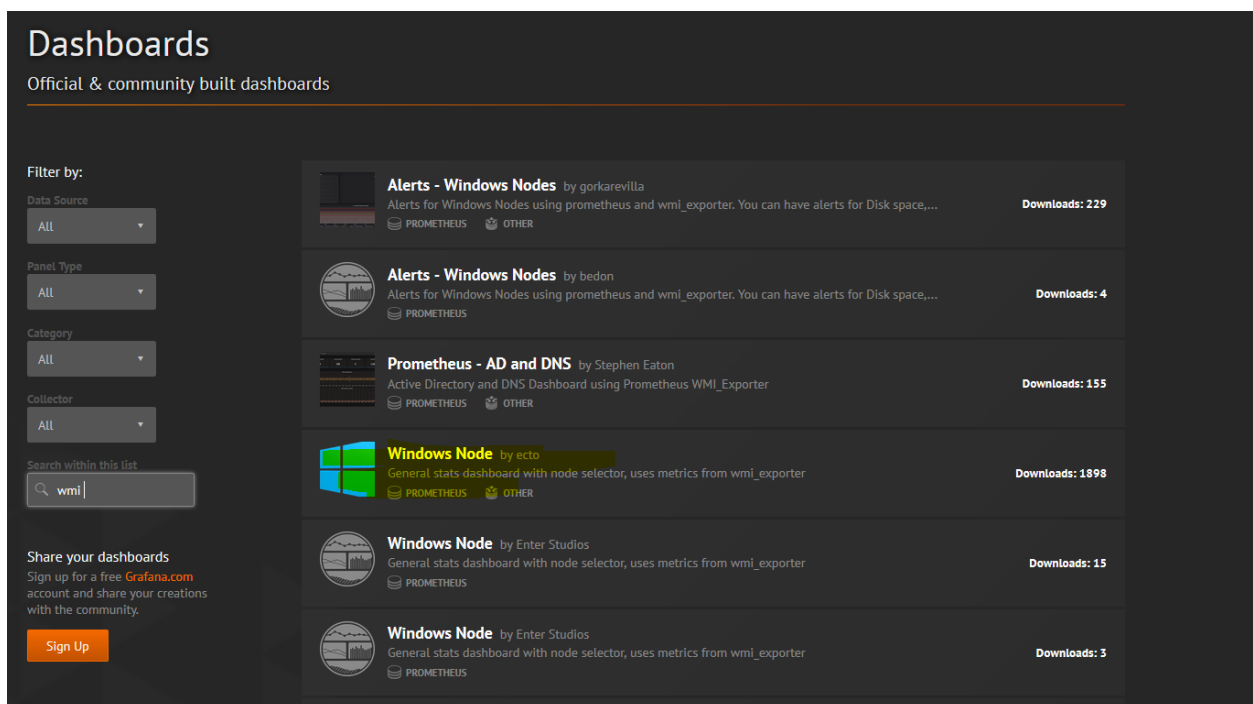
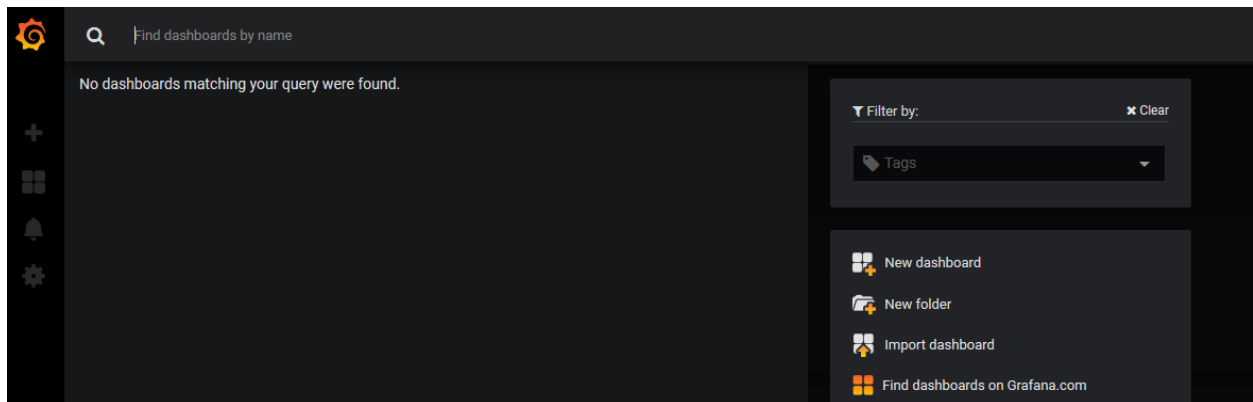
Data source is working


Save & Test

Delete


Back


To see data in Dashboard click Find Dashboard on Graphana.com




 [Grafana](#) [GrafanaCloud](#) [Docs](#) [Community](#) [Events](#) [GrafanaCon](#) [Blog](#) [Log In](#)

All dashboards » [Windows Node](#)

 **Windows Node** by [ecto](#) Downloads: 1898

 DASHBOARD
General stats dashboard with node selector, uses metrics from wmi_exporter
Last updated: a year ago

[Overview](#) [Revisions](#)




Uses metrics from https://github.com/martinlindhe/wmi_exporter

Features:

- Node selector
- Summary CPU load
- Memory stats
- Network load
- Hard disks usage



Get this dashboard:

2129

 Copy ID to Clipboard


[Download JSON](#)
[How do I import this dashboard?](#)

Dependencies:

-  GRAFANA 4.2.0
-  GRAPH

After downloading the json place it in the Grafana folder


To import the Dash board the home → Import Dashboard

 **Import**
Import dashboard from file or Grafana.com

[Upload .json File](#)

Grafana.com Dashboard

Or paste JSON

 Load



Import

Import dashboard from file or Grafana.com

Importing Dashboard from [Grafana.com](https://grafana.com)

Published by

Updated on

Options

Name

Windows Node



Folder

General ▾

Unique identifier (uid)



auto-generated

change

prometheus



PromWin



 Import

Cancel