

# Grafana Setup

## Introduction

This document outlines installing grafana in AR environment.  
Connecting grafana to two data sources ( postgres , cloudwatch)

## Security Groups

Port 3000 to access grafana. We can change the port as needed. Updated  
docker-compose.yml

## Installing Grafana

This is part of docker file. Refer docker-compose.yml

## IAM Policy

## Create policy

The screenshot shows the AWS IAM console interface. The left sidebar contains the 'Identity and Access Management (IAM)' menu with options like Dashboard, Access management, and Access reports. The main content area displays the details for a policy named 'AR-Policy-CloudWatch'. The policy is described as 'For Grafana to read the EC2, Cloud watch metrics'. The 'Policy details' section shows the following information:

Type	Creation time	Edited time	ARN
Customer managed	March 27, 2024, 19:10 (UTC-05:00)	March 27, 2024, 19:10 (UTC-05:00)	arn:aws:iam::407392395939:policy/AR-Policy-CloudWatch

Below the details, there are tabs for 'Permissions', 'Entities attached', 'Tags', 'Policy versions (1)', and 'Access Advisor'. The 'Permissions' tab is active, showing 'Permissions defined in this policy'. There are buttons for 'Edit', 'Summary', and 'JSON'.

## Sample Policy

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "AllowReadingMetricsFromCloudWatch",
      "Effect": "Allow",
      "Action": [
        "cloudwatch:ListMetrics",
        "cloudwatch:GetMetricStatistics",
        "cloudwatch:GetMetricData"
      ],
      "Resource": "*"
    },
    {
      "Sid": "AllowReadingTagsInstancesRegionsFromEC2",
      "Effect": "Allow",
      "Action": [
        "ec2:DescribeTags",
        "ec2:DescribeInstances",
        "ec2:DescribeRegions"
      ]
    }
  ]
}
```

```

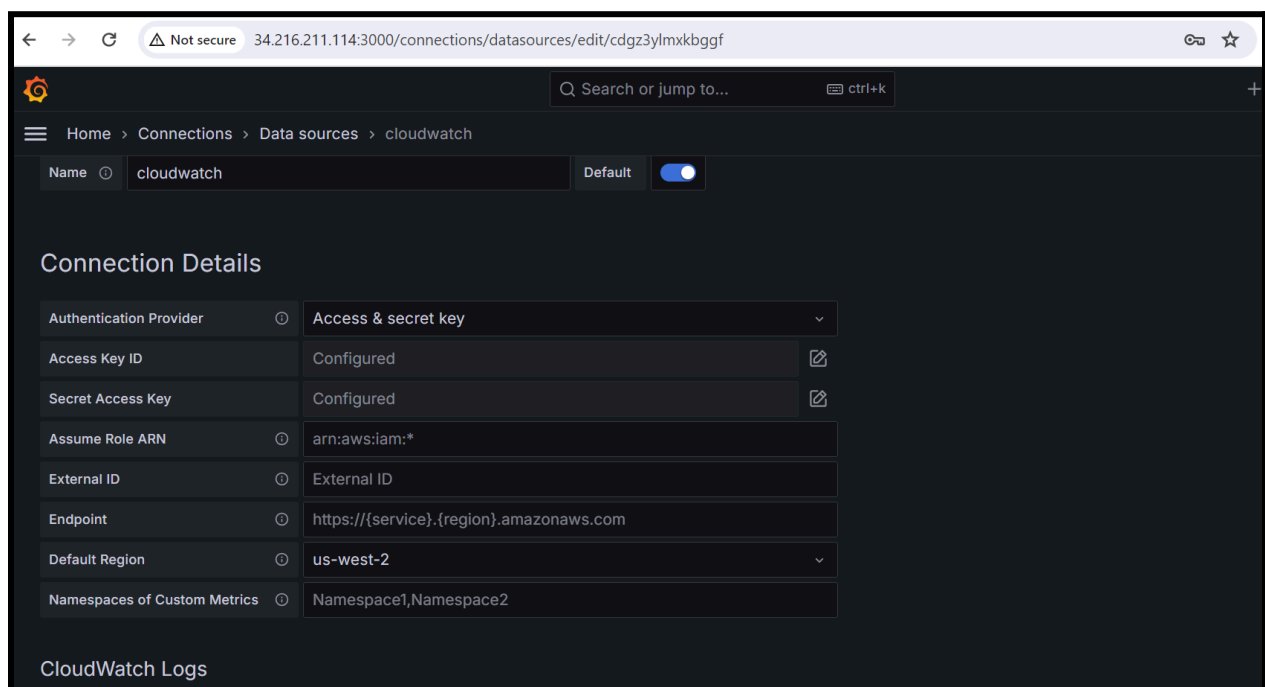
    ],
    "Resource": "*"
  }
]
}

```

## Connecting CloudWatch to Grafana

### Create Cloud-Watch connection

Authentication using Access and Secret key is not the best option.  
But since we are connecting within the AWS as a Development POC



### Import Ec2 metrics Dashboards

## Connecting Grafana to Postgres

Obtain docker container IP

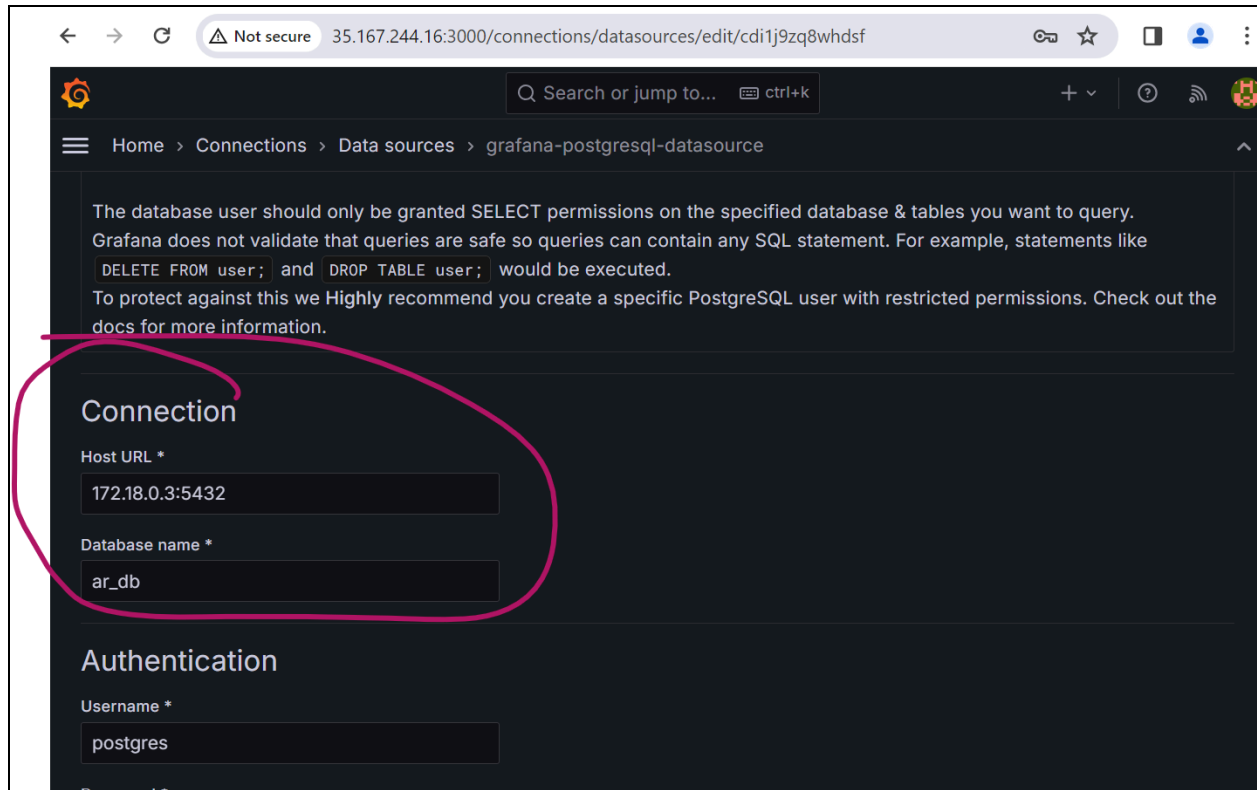
```
admin@ip-172-31-38-201:~/Athlete-Reserve-App/server$ sudo docker ps
```

CONTAINER ID	IMAGE	NAMES	COMMAND	CREATED	STATUS	PORTS
9ac254d81357	dpape/pgadmin4		"/entrypoint.sh"	33 minutes ago	Up 33 minutes	443/tcp, 0.0.0.
0:5050->80/tcp, ::5050->80/tcp		pgadmin				
f309c5d29c59	postgis/postgis:11-3.3-alpine		"docker-entrypoint.s..."	33 minutes ago	Up 33 minutes	0.0.0.0:5432->5
432/tcp, ::5432->5432/tcp		server_db_1				
27a181f3d369	grafana/grafana		"/run.sh"	33 minutes ago	Up 33 minutes	0.0.0.0:3000->3
000/tcp, ::3000->3000/tcp		grafana				

```
admin@ip-172-31-38-201:~/Athlete-Reserve-App/server$ sudo docker inspect f309c5d29c59
```

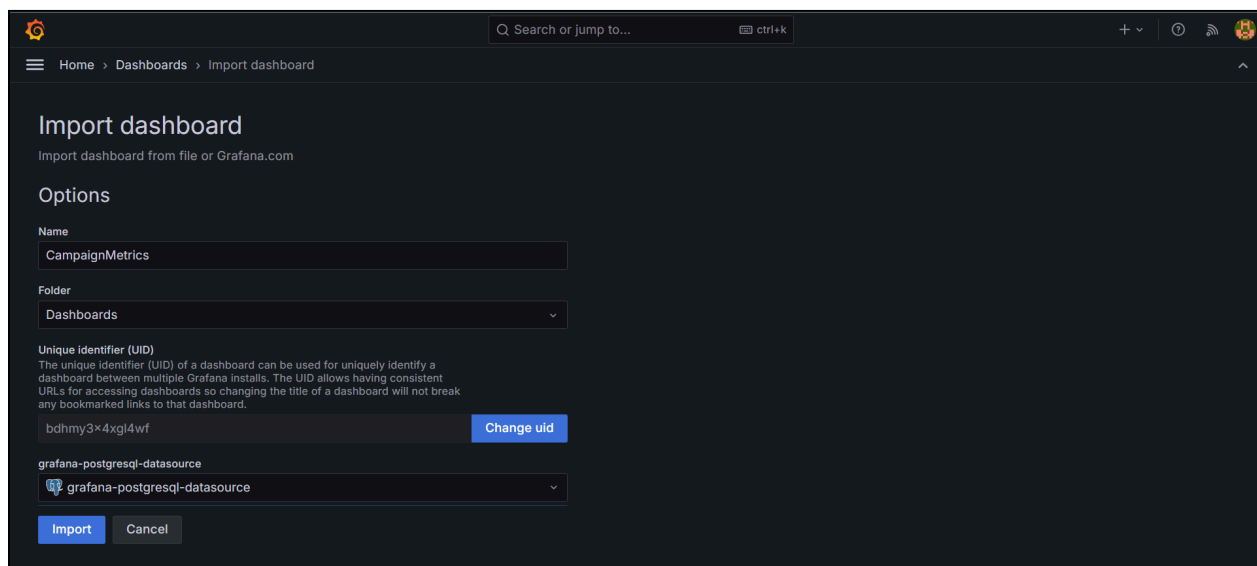
```
{
  "Aliases": [
    "db",
    "f309c5d29c59"
  ],
  "NetworkID": "cf11689a06667843f95507db5a6a3f0bb8cd45e36b56b5ee965bd7d177d18778",
  "EndpointID": "bed7ed1969e6644d86cfeaf2a418fb85a8d2932dac98877596bd51076c57d92a",
  "Gateway": "172.18.0.1",
  "IPAddress": "172.18.0.3",
  "IPPrefixLen": 16,
  "IPv6Gateway": "",
  "GlobalIPv6Address": "",
  "GlobalIPv6PrefixLen": 0,
  "MacAddress": "02:42:ac:12:00:03",
  "DriverOpts": null
}
```

## Connecting postgres DataSource



## Importing Dashboards

Import->Upload JSON File(This will our repo/server/grafana/.json)

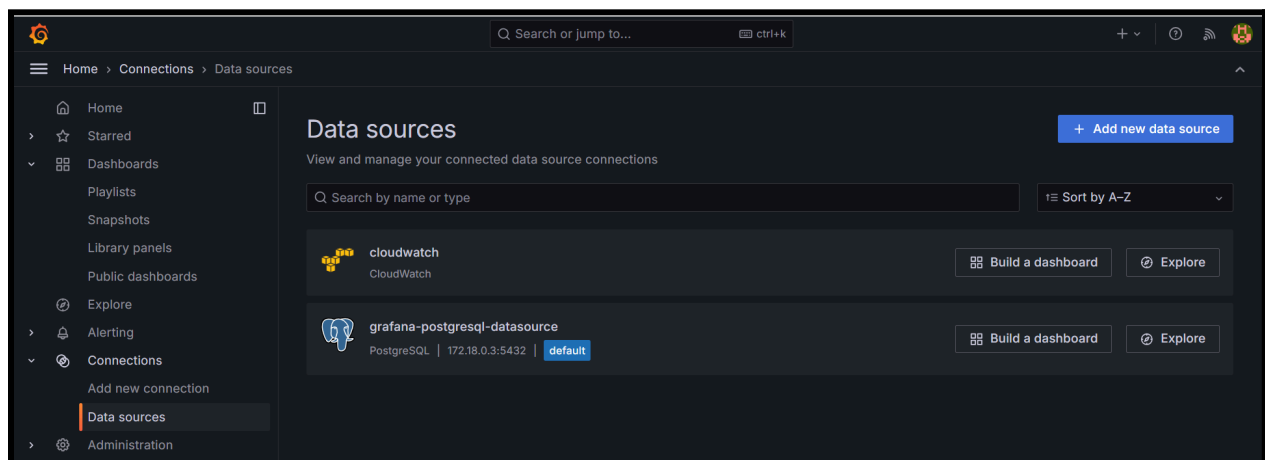


## Pending DevOps Items

- Automate iam policy
- Automate sg groups related to grafana
- Automate creations of connections
- Automate installing dashboards in server/grafana/\*.json files

## Final step

Validate two data sources



## Dashboards

Import all json listed in server/grafana/\*.json

