

# 📁 - Grafana 📁

- [Grafana](#)

# Grafana

## 1. Grafana 简介

Grafana 是一个开源的监控和可视化平台。它可以帮助 IT 团队、数据分析师、开发人员等快速了解系统运行状况，并发现潜在问题。

### 主要功能

- 1. 支持多种数据源 (InfluxDB, Prometheus, MySQL, PostgreSQL 等)
- 2. 提供丰富的可视化图表
- 3. 支持告警功能 (邮件、短信、钉钉等)
- 4. 支持仪表盘 (Alert) 配置
- 5. 支持用户权限管理

## 2. Grafana 安装

### 1) Linux (Ubuntu) 安装

wget [https://dl.grafana.com/oss/release/grafana-7.1.0-1.x86\\_64.rpm](https://dl.grafana.com/oss/release/grafana-7.1.0-1.x86_64.rpm)

yum install grafana-7.1.0-1.x86\_64.rpm

```
sudo systemctl enable --now grafana-server # Grafana 服务启动并开机自启
```

- enable : 启动并开机自启
- --now : 立即启动

```
sudo systemctl status grafana-server # 查看服务状态
```

### 2) Windows 安装

- 从 [Grafana 官网](#) 下载 Windows 安装包
- 运行 grafana-server.exe 启动

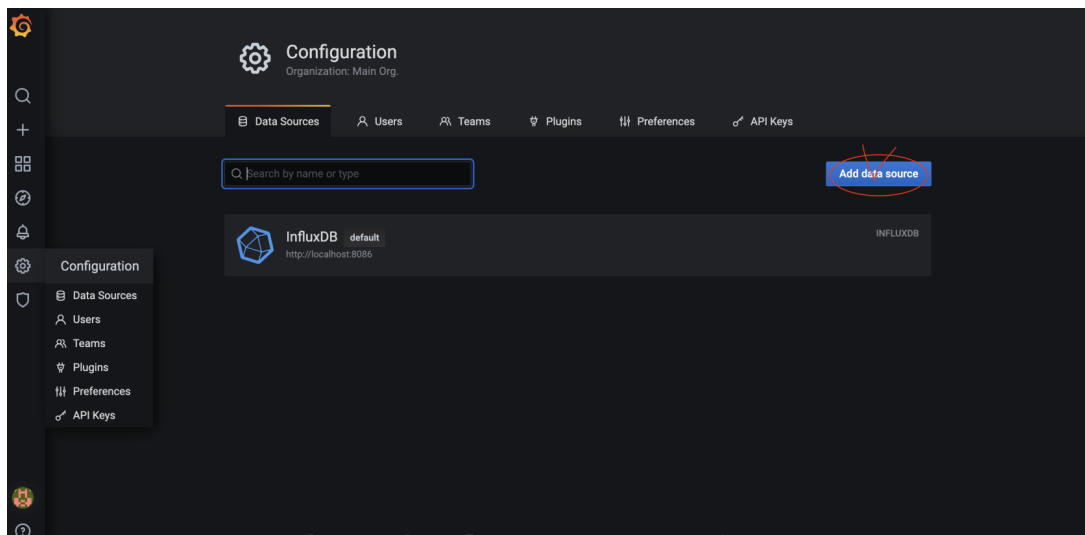
## 1) Grafana 安装与配置

访问地址: `http://localhost:3000` 用户名: `admin/admin` (默认)

## 3. InfluxDB 安装与配置

### InfluxDB 安装与配置

InfluxDB 是一个时间序列数据库 (time-series database)，用于存储和查询时间序列数据。它支持多种数据源，包括 InfluxDB、Prometheus、Elasticsearch 等。



1. Grafana 安装 URL: `http://localhost:3000` # **localhost** 是你的 IP
2. Grafana 安装 **Configuration** → **Data Sources**
3. "Add data source" 选择 **InfluxDB**

#### 1. HTTP

- URL: `http://localhost:8086`





#### InfluxDB Details

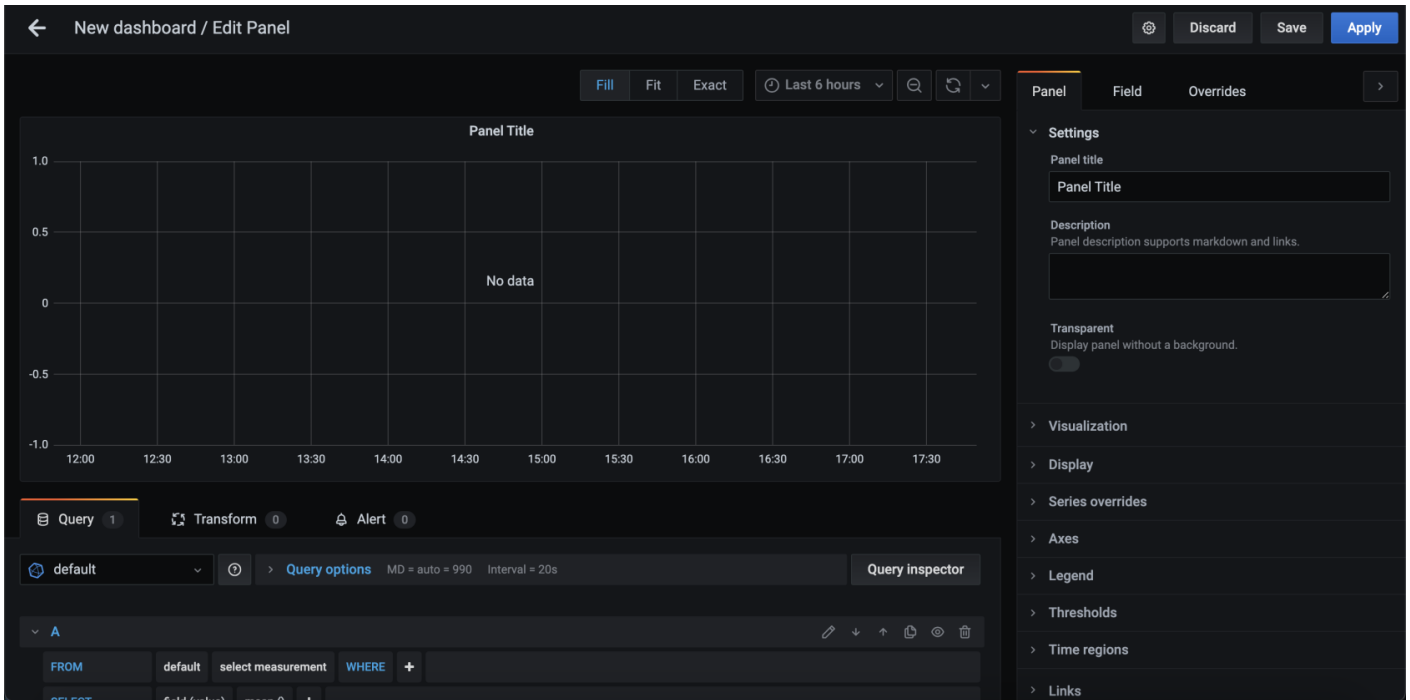
- Database: `DB`
- User: `DB`
- Password: `DB`
















2. "Save & Test" 测试成功

## 4. 验证与部署

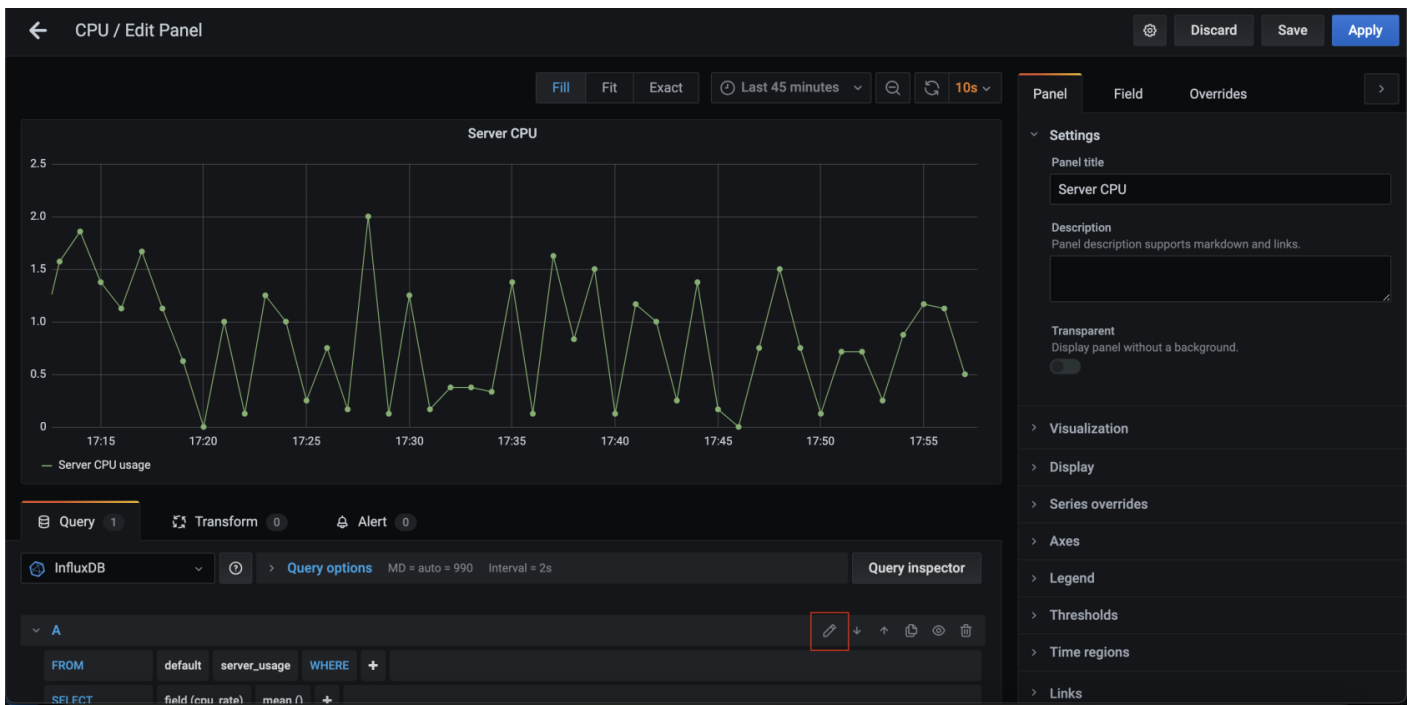


1. **Dashboard** → **New Dashboard** 
2. "Add new panel"   



- Panel Title:   
- Visualization: , ,   
- Queries: InfluxDB, Prometheus   
- Time range:    

## 5. (InfluxDB )



Row Query `SELECT mean("cpu_rate") FROM "user_usage" WHERE $timeFilter GROUP BY time(1m), "user_name" fill(0)`, Query inspector

## InfluxDB

```
SELECT mean("cpu_rate") FROM "user_usage" WHERE $timeFilter GROUP BY time(1m), "user_name" fill(0)
```

- `mean("cpu_rate")`: CPU 사용률
- `GROUP BY time(1m), "user_name"`: 1분 단위, 사용자별
- `fill(0)`: NULL 값을 0로 채움

## 6. Line & Bar Chart

Line Chart, Bar Chart

- `Lines`: 선 그래프
- `Bars`: 막대 그래프
- `Points`: 점 그래프 (ex) `# 1`은 1분 단위, `# 5m`은 5분 단위
- `Fill`: `#`로 채움 (ex) `# 0.5`은 0.5로 채움
- `Stacking`: 겹쳐서 표시

# 7. Tooltip, Legend, Alias

## Tooltip

- **Mode: Single** → `[[{"time": "2017-01-01T00:00:00Z", "cpu_rate": 10, "user_name": "user1"}]]`
- **Mode: All series** → `[[{"time": "2017-01-01T00:00:00Z", "cpu_rate": 10, "user_name": "user1"}]]`

## Legend ([[]])

- `To the right` → `[[{"time": "2017-01-01T00:00:00Z", "cpu_rate": 10, "user_name": "user1"}]]`
- `[Min, Max, Avg, Total, Current]` → `[[{"time": "2017-01-01T00:00:00Z", "cpu_rate": 10, "user_name": "user1"}]]`

## Alias

```
SELECT mean("cpu_rate") FROM "user_usage" WHERE $timeFilter GROUP BY time(1m), "user_name" fill(0)
```

- **Alias by**: `$tag_user_name` → `user_name`

# 8. Grafana

## 1) Grafana

```
nohup grafana-server > /dev/null 2>&1 &
```

## 2) [[[]]] ([[]])

```
sudo nano /etc/grafana/grafana.ini
```

- `http_port = 3000`: `[[[]]]`
- `auth.anonymous enabled = true`: `[[[]]]`

### 3) 安装 插件

## 1) Grafana 安装 插件

```
nohup grafana-server > /dev/null 2>&1 &
```

## 2) 安装 插件 (安装 插件)

```
sudo nano /etc/grafana/grafana.ini
```

- `http_port = 3000`: 设置 端口
- `auth.anonymous enabled = true`: 设置 匿名 用户