

TWCloud and Cassandra Node

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- [Configure Grafana](#)

Required *.json file:

- [Teamwork_Cloud_Dashboard.json](#)

The following components are deployed on each TWC/Cassandra node:

- Telegraf - system metrics collector
- Dropwizard metrics-graphite-3.1.2.jar - metrics publishing agent for Java

Install Telegraf

1. Install Telegraf in the TWCloud/Cassandra node
 - a. If you have not created the **influxdb.repo** as in step 1a of the [Monitoring Mode](#), do so at this time.
 - b. Install with the command:

```
sudo yum install telegraf
```

- c. Edit `/etc/telegraf/telegraf.conf` as follows
 - i. Locate the section titled "[[outputs.influxdb]]"
 - ii. Edit the line with the **urls** = tag as follows:

```
urls = ["http://monitoringnode_ip:8086"] where monitoringnode_ip is the IP address of the
node where influxdb is installed (if it is located on the same machine, you may use
127.0.0.1).
```

- d. Enable the Telegraf service on startup:

```
sudo systemctl enable telegraf
```

- e. Start the Telegraf service:

```
sudo systemctl start telegraf
```

2. Restart the Teamwork Cloud service:

```
sudo service twcloud-svc restart
```

3. Modify Cassandra to allow remote monitoring
 - a. Download *metrics-graphite-3.1.2.jar* from <http://central.maven.org/maven2/io/dropwizard/metrics/metrics-graphite/3.1.2/metrics-graphite-3.1.2.jar>
 - b. Change permissions to allow execution:

```
sudo chmod 755 metrics-graphite-3.1.2.jar
```

- c. Copy *metrics-graphite-3.1.2.jar* to `/usr/share/cassandra/lib/`
- d. Edit `/etc/cassandra/default.conf/cassandra-env.sh`, adding the following at the bottom:

```
# Enable metrics reporting to InfluxDB using the yammer library
METRICS_REPORTER_CFG="metrics-reporter-graphite.yaml"
JVM_OPTS="$JVM_OPTS -Dcassandra.metricsReporterConfigFile=$METRICS_REPORTER_CFG"
```

- e. Create a file `/etc/cassandra/default.conf/metrics-reporter-graphite.yaml` with the following content:

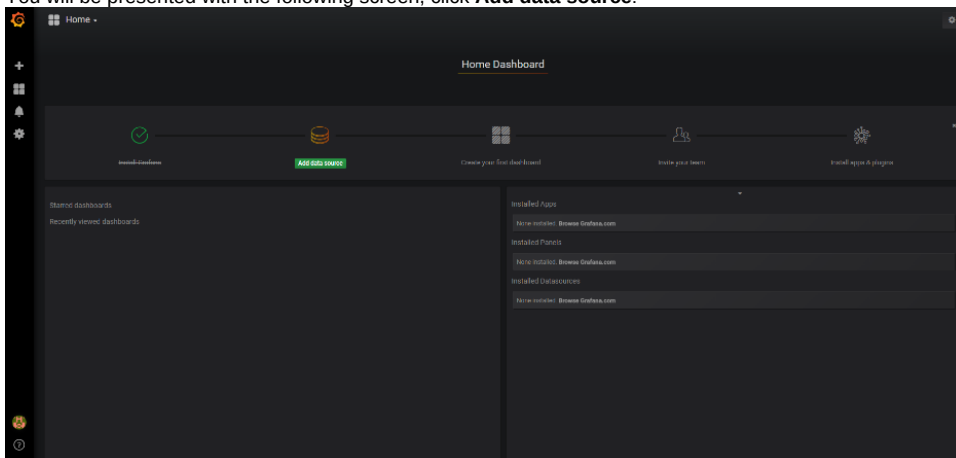
```
graphite:
  -
    period: 30
    timeunit: 'SECONDS'
    prefix: 'HOST_NAME'
    hosts:
      - host: 'IP_ADDRESS'
        port: 2003
    predicate:
      color: 'white'
      useQualifiedName: true
    patterns:
      - '^org.apache.cassandra.+ '
      - '^jvm.+ '
```

- i. Replacing **HOST_NAME** with the Cassandra node's hostname, and **IP_ADDRESS** with the IP address of the monitoring node (where Influxdb is installed).
- f. Restart Cassandra:

```
sudo service cassandra restart
```

Configure Grafana

4. Configuring Grafana monitoring dashboard:
 - a. Log into http://MONITORINGNODE_IP:3000 - you will be displayed the Grafana Login Screen - default credentials are admin /admin. Upon logging in, you will be prompted to change the admin password.
 - b. You will be presented with the following screen, click **Add data source**:



- c. Create the data sources, enter the information as in the following screenshots, and press **Save & Test** for each. After the data source gets created, click the **Data Sources** link to continue adding data sources.



Data Sources / New

Type: InfluxDB

Settings

Name	Cassandra	?	Default	☐
Type	InfluxDB			

HTTP

URL	http://localhost:8086	?
Access	Server (Default)	Help

Auth

Basic Auth	☐	With Credentials	?	☐
TLS Client Auth	☐	With CA Cert	?	☐

Skip TLS Verification (Insecure)	☐
----------------------------------	--------------------------

Advanced HTTP Settings

Whitelisted Cookies	Add Name	?
---------------------	----------	-------------------

InfluxDB Details

Database	graphite		
User		Password	

Database Access

Setting the database for this datasource does not deny access to other databases. The InfluxDB query syntax allows switching the database in the query. For example: `SHOW MEASUREMENTS ON _internal` or `SELECT * FROM "_internal"."database" LIMIT 10`

To support data isolation and security, make sure appropriate permissions are configured in InfluxDB.

Min time interval	10s	?
-------------------	-----	-------------------

Save & Test	Back
-------------	------



Data Sources / Cassandra

Type: InfluxDB

Settings

NameCassandra ⓘDefault☐

TypeInfluxDB ▾

HTTP

URLhttp://localhost:8086 ⓘ

AccessServer (Default) ▾Help ▶

Auth

Basic Auth☐With Credentials ⓘ☐

TLS Client Auth☐With CA Cert ⓘ☐

Skip TLS Verification (Insecure)☐

Advanced HTTP Settings

Whitelisted CookiesAdd Name ⓘ

InfluxDB Details

Databasegraphite

UserPassword

Database Access

Setting the database for this datasource does not deny access to other databases. The InfluxDB query syntax allows switching the database in the query. For example: `SHOW MEASUREMENTS ON _internal` OR `SELECT * FROM "_internal"..>."database" LIMIT 10`

To support data isolation and security, make sure appropriate permissions are configured in InfluxDB.

Min time interval10s ⓘ

✓ Data source is working

Save & TestDeleteBack



Configuration

Organization: Main Org.

Data Sources

UsersTeamsPluginsPreferencesAPI Keys

Filter by name or type

GridList

+ Add data source

INFLUXDB



Cassandra

http://localhost:8086



Data Sources / Telegraf

Type: InfluxDB

Settings

Name

Telegraf

?

Default

☐

Type

InfluxDB

▼

HTTP

URL

http://localhost:8086

?

Access

Server (Default)

▼

Help

Auth

Basic Auth

☐

With Credentials

?

☐

TLS Client Auth

☐

With CA Cert

?

☐

Skip TLS Verification (Insecure)

☐

Advanced HTTP Settings

Whitelisted Cookies

Add Name

?

InfluxDB Details

Database

telegraf

User

Password

Database Access

Setting the database for this datasource does not deny access to other databases. The InfluxDB query syntax allows switching the database in the query. For example: `SHOW MEASUREMENTS ON _internal` OR `SELECT * FROM "_internal"..> "database" LIMIT 10`

To support data isolation and security, make sure appropriate permissions are configured in InfluxDB.

Min time interval

10s

?

✓ Data source is working

Save & Test

Delete

Back



Configuration

Organization: Main Org.

Data Sources

Users

Teams

Plugins

Preferences

API Keys

Filter by name or type

Add data source

INFLUXDB



Cassandra

http://localhost:8086

INFLUXDB



Telegraf

http://localhost:8086



Data Sources / Teamwork Cloud

Type: InfluxDB

Settings

NameTeamwork Cloud ⓘDefault☐

TypeInfluxDB

HTTP

URLhttp://localhost:8086 ⓘ

AccessServer (Default) Help ▶

Auth

Basic Auth☐With Credentials ⓘ☐

TLS Client Auth☐With CA Cert ⓘ☐

Skip TLS Verification (Insecure)☐

Advanced HTTP Settings

Whitelisted CookiesAdd Name ⓘ

InfluxDB Details

Databasetwcloud

UserPassword

Database Access

Setting the database for this datasource does not deny access to other databases. The InfluxDB query syntax allows switching the database in the query. For example: `SHOW MEASUREMENTS ON _internal` or `SELECT * FROM "_internal"..>database" LIMIT 10`

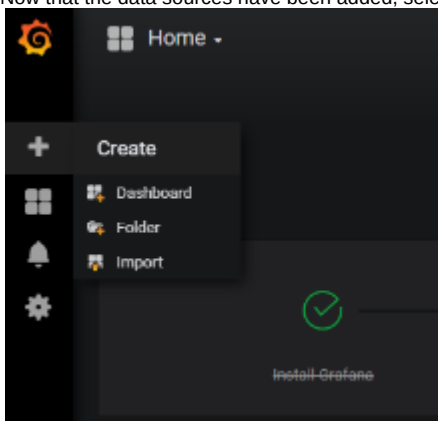
To support data isolation and security, make sure appropriate permissions are configured in InfluxDB.

Min time interval10s ⓘ

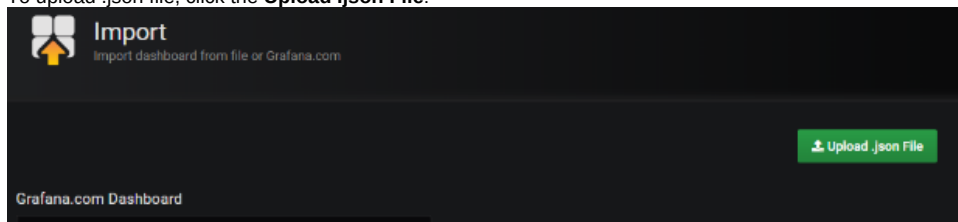
✓ Data source is working

Save & TestDeleteBack

d. Now that the data sources have been added, select the option to import a dashboard:

A screenshot of the Grafana web interface. On the left, there is a sidebar with icons for Home, Create, Dashboard, Folder, Import, and Settings. The 'Create' menu is open, showing options for Dashboard, Folder, and Import. The 'Import' option is highlighted. In the background, there is a large green checkmark and the text 'Install Grafana'.

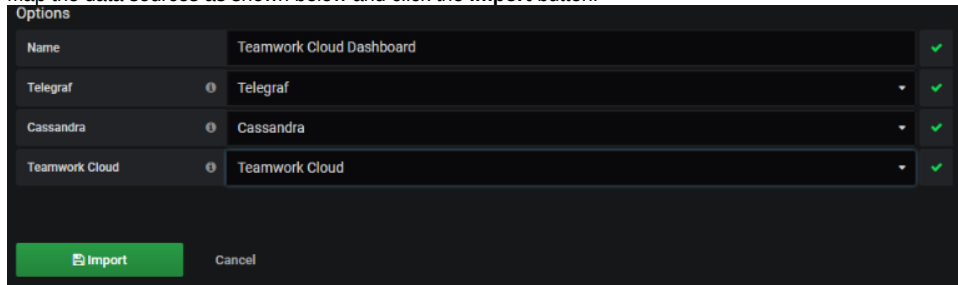
- e. To upload .json file, click the **Upload .json File**:



- i. Select the provided [Teamwork_Cloud_Dashboard.json](#).
- f. At this point, you will be presented with the following screen, in which you will need to map the data sources:

The image shows the 'Options' screen in Grafana. It has a table with four rows: 'Name', 'Telegraf', 'Cassandra', and 'Teamwork Cloud'. The 'Name' row has a text input field containing 'Teamwork Cloud Dashboard' and a green checkmark icon. The other three rows have dropdown menus, each with the text 'Select a InfluxDB data source' and a downward arrow. At the bottom, there is a green 'Import' button and a 'Cancel' link.

- g. Map the data sources as shown below and click the **Import** button:

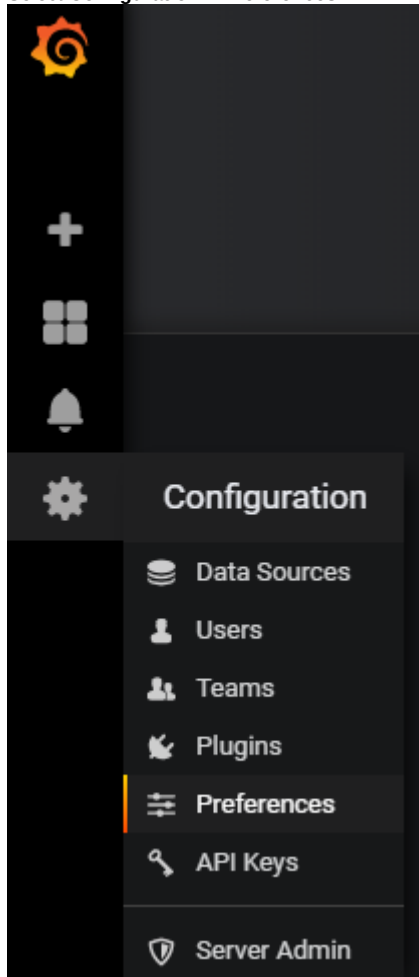
The image shows the 'Options' screen in Grafana, similar to the previous one, but with the data sources mapped. The 'Name' row is the same. The 'Telegraf' row now has a dropdown menu with 'Telegraf' selected and a green checkmark. The 'Cassandra' row has a dropdown menu with 'Cassandra' selected and a green checkmark. The 'Teamwork Cloud' row has a dropdown menu with 'Teamwork Cloud' selected and a green checkmark. At the bottom, there is a green 'Import' button and a 'Cancel' link.

- h. To make the Teamwork Cloud dashboard your home dashboard, perform the following steps:

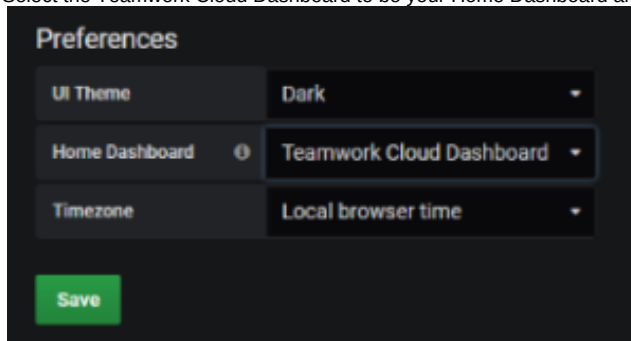
- i. Mark the Teamwork Cloud Dashboard as a favorite:



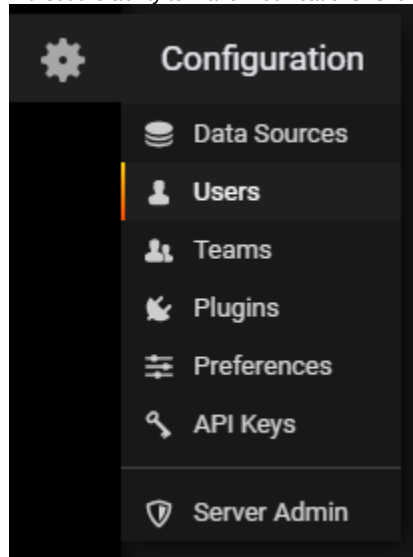
- ii. Select **Configuration > Preferences**



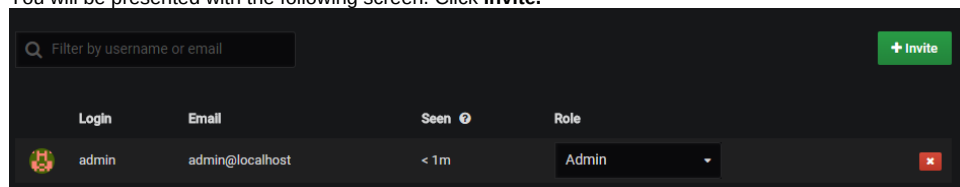
- iii. Select the Teamwork Cloud Dashboard to be your Home Dashboard and click **Save**.



- iv. The admin user has permissions allowing full access. Create a limited access user who will be allowed to view the dashboard without the ability to make modifications. Click **Users**.



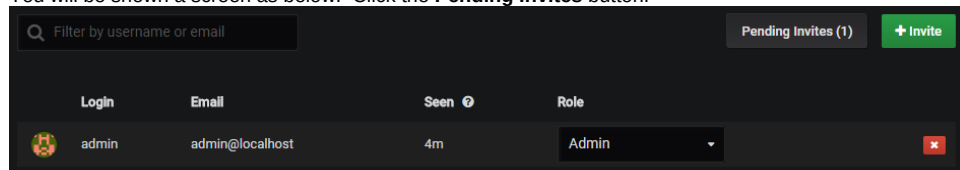
- v. You will be presented with the following screen. Click **Invite**.



- vi. Create a guest user by entering the information as below, and clicking **Invite**.

A screenshot of the 'Invite User' form in Grafana. The title is 'Invite User' in large white text. Below it is a subtitle: 'Send invite or add existing Grafana user to the organization Main Org.' The form has four input fields: 'Email or Username' with the value 'guest', 'Name' with the value 'guest', 'Role' with a dropdown menu set to 'Viewer', and 'Send invite email' with a checkbox. At the bottom are two buttons: a green 'Invite' button and a grey 'Back' button.

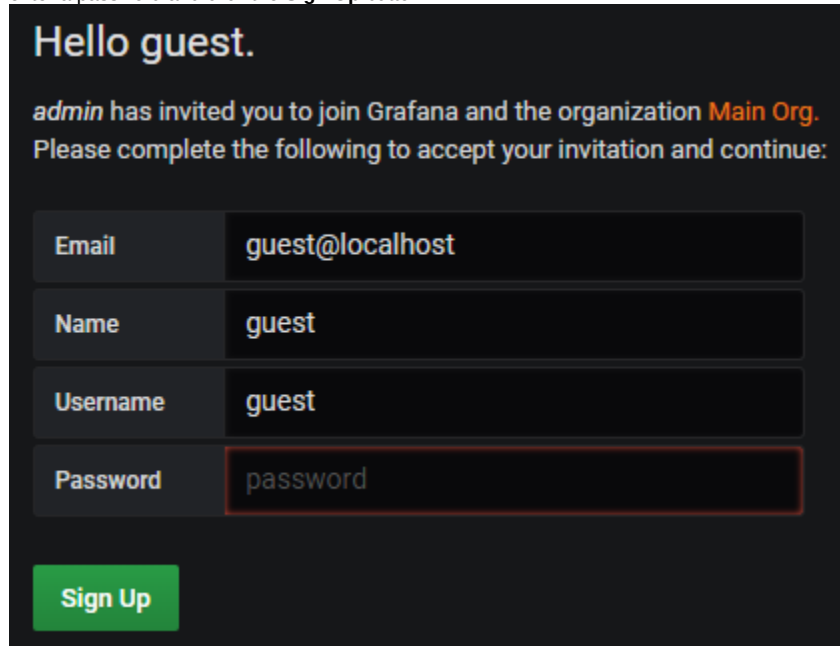
- vii. You will be shown a screen as below. Click the **Pending Invites** button.



- viii. Click the **Copy Invite** button.

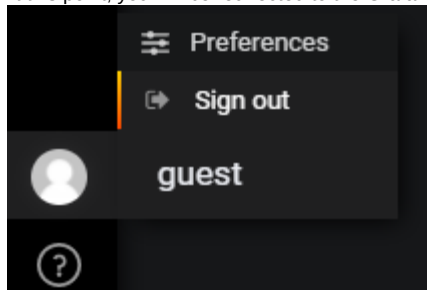


- ix. Paste the link which was copied to your clipboard on a new browser window, and replace "localhost" with the IP address of the monitoring node. You will be presented with the following screen. Change the email field from "guest" to "guest@localhost", enter a password and click the **Sign Up** button.

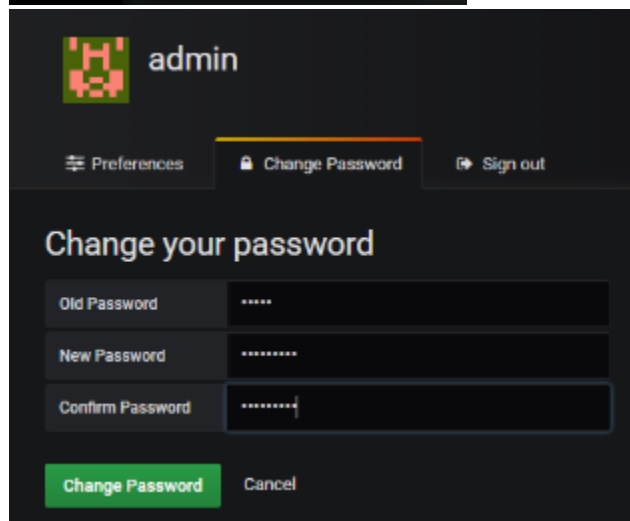
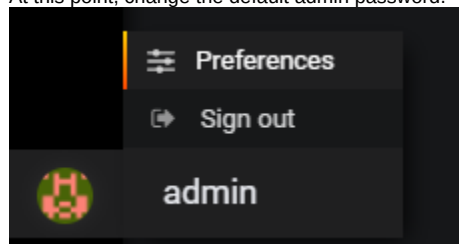


The image shows a Grafana invitation screen for a guest user. At the top, it says "Hello guest." followed by "admin has invited you to join Grafana and the organization Main Org. Please complete the following to accept your invitation and continue:". Below this is a form with four fields: "Email" with the value "guest@localhost", "Name" with the value "guest", "Username" with the value "guest", and "Password" with the value "password". A green "Sign Up" button is at the bottom left.

At this point, you will be redirected to the Grafana dashboard under the new login. Sign out, and sign back in as admin.



- x. At this point, change the default admin password.



The image shows the Grafana "Change your password" screen. At the top, it says "admin" next to a profile icon. Below this is a navigation bar with "Preferences", "Change Password", and "Sign out" options. The main section is titled "Change your password" and contains three input fields: "Old Password" (masked with "****"), "New Password" (masked with "*****"), and "Confirm Password" (masked with "*****"). A green "Change Password" button and a "Cancel" button are at the bottom.

