

**Apigee™**

*Apigee Edge for Private Cloud*



**v4.16.09**

*September 15, 2016*

# **Apigee Monitoring Dashboard - Beta Release**

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# Contents

[Apigee Monitoring Dashboard - Beta Release](#)

[Dashboard display](#)

[Sending a dashboard snapshot to Apigee](#)

[Dashboard components](#)

[Installing the Monitoring Dashboard](#)

[System requirements](#)

[Port requirements for apigee-influxdb](#)

[Config files for installing dashboard components](#)

[Configuration Parameters for apigee-influxdb](#)

[Configuration parameters for apigee-teleggraf](#)

[Configuration Parameters for apigee-grafana](#)

[Installation instructions](#)

[Install apigee-influxdb on a single Edge node or standalone node](#)

[Install apigee-teleggraf on every Edge node](#)

[Install apigee-grafana on a single Edge node](#)

[Troubleshooting installation](#)

# Apigee Monitoring Dashboard - Beta Release

This release of Edge contains an Beta version of the new monitoring dashboard. The dashboard helps you understand the health of various components (Routers, Message Processors, ZooKeeper, Cassandra) as well as HTTP error codes for various orgs and environments in your deployment. You can also snapshot these details and share them with Apigee if required for resolving support incidents.

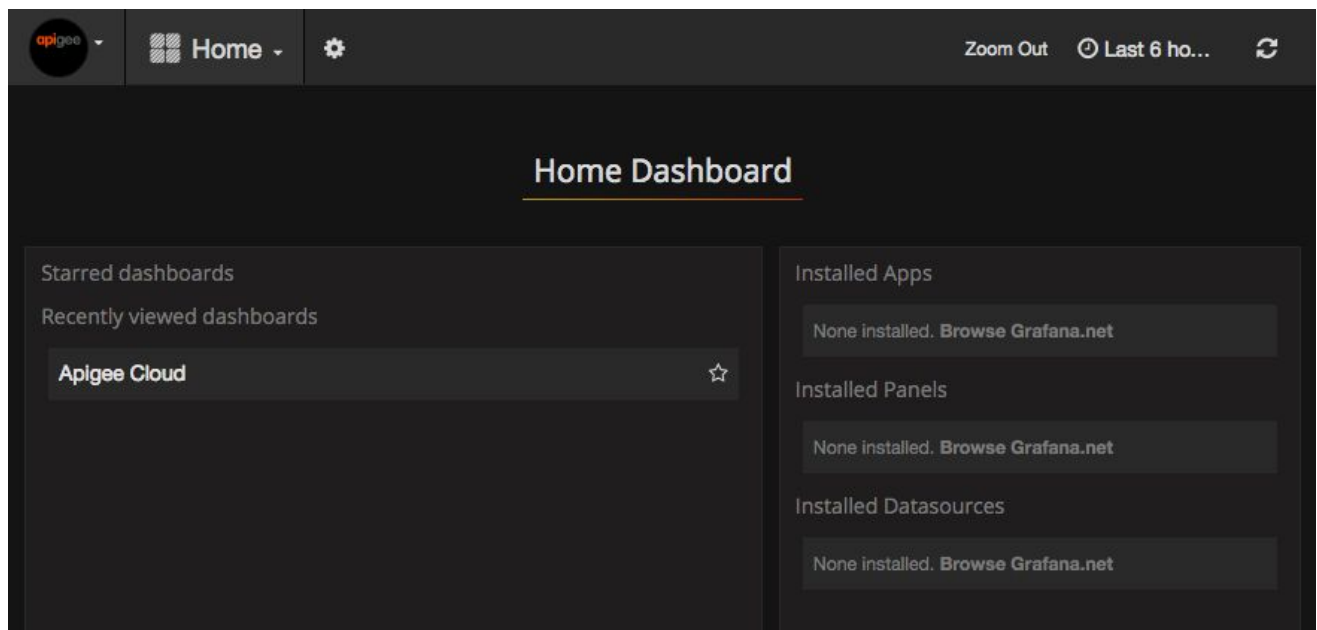
## Dashboard display

After installing the dashboard, access it by opening the following URL in a browser:

`http://grafana_IP_or_DNS:3000`

where ***grafana\_IP\_or\_DNS*** is the IP or DNS name of the node running the Apigee `apigee-grafana` component. You will be prompted to enter the administrator's username: password as defined when you installed `apigee-grafana`. The default values from the installation instructions below are `admin:admin`.

After you log in, you see the following screen:

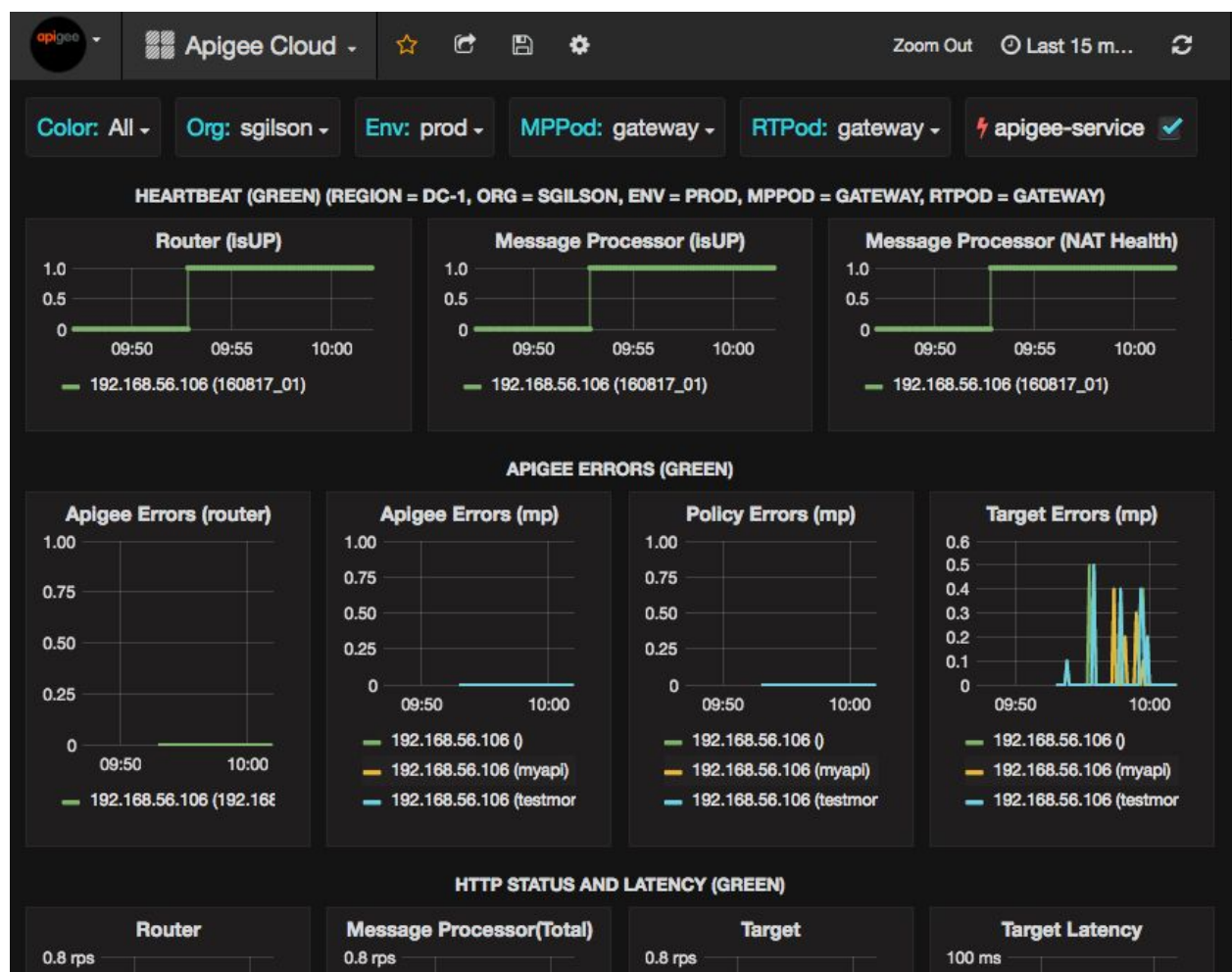


Select the logo in the upper-left corner to open the menu bar. In the menu bar, select **Pin** to keep the bar open.

In the menu bar, select:

- **admin Main Org.** to set administrator details, such a password and email address.
- **Dashboards > Home** to open the screen shown above. Then select **Apigee Cloud** to see the dashboard.
- **Data Sources** to see the data sources for the `apigee-grafana` component. Select each data source, and then select the **Save & Test** button to validate the connection.
- **Plugins** to display the list of installed plugins.
- **Admin** to set information about Grafana.

Selecting **Apigee Cloud** opens the dashboard display shown below:



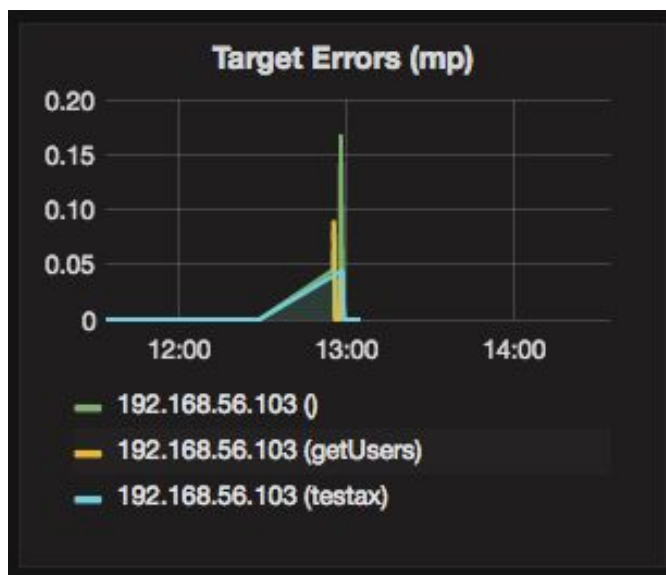
On this screen, you can see information about the:

- **Router:** status, traffic, errors, load, and more.
- **Message Processor:** status and health, traffic, target latency, target response codes, and more.
- **Node metrics:** CPU usage, disk space, heap usage, and more.

Notice the buttons across the top of the charts:

- **Color:** set to **All**. For the Beta, **All** is the only supported option.
- **Org:** set to the name of your organization.
- **Env:** Set to the name of an environment in the organization.
- **MPPod** and **RTPod:** set to the pod name of the Message Processors and Routers. By default it is "gateway" unless you changed it at install time.
- **apigee-service:** check to display information about executions of the `apigee-service` utility.

Some of the charts show information for individual API proxies and all API proxies together. For example, in the chart below, you can see a line for all proxies, identified by the green line for `192.168.56.103 ()`, the IP address of the Message Processor:



There are also individual lines in the chart for different API proxies named `getUsers` and `testAX`, identified in the chart as the orange line for `192.168.56.103 (getUsers)` and the blue line for `192.168.56.103 (testax)`.

By default, the dashboard shows information for the last 5 minutes. Select the **Today** at the top-right of the dashboard to select a different interval.

## Sending a dashboard snapshot to Apigee

To help Apigee diagnose and debug an issue, you can send a snapshot of your dashboard to Apigee Support. Apigee can then inspect your dashboard to help determine the cause of the issue.

To send a dashboard snapshot to Apigee:

1. Select the **Share Dashboard** icon at the top of the dashboard (highlighted in the red box below):



2. In the pop-up window, select **Snapshot Sharing**.
3. Leave all fields as they are, and select the **Publish to snapshot.apigee.net** button.
4. A pop-up window appears containing a link. Copy that link and send it to Apigee.

## Dashboard components

The dashboard relies on several components that you install after installing Edge:

- `apigee-telegraf`

A wrapper component for [telegraf](#), that gathers metrics from the system and running components and pushes them to the `apigee-influxdb` [Time Series DataBase \(TSDB\)](#).

Install this component on all Edge runtime and data components such as the Edge Message Processor, Router, Postgres server, Cassandra, and Zookeeper nodes.

- `apigee-influxdb`

A wrapper component for [influxdb](#), that stores the metrics data and exposes it through an API so the data can be rendered in a UI by using `apigee-grafana`.

Install this component centrally so it can be accessed by all the `apigee-telegraf` components running on individual Edge nodes.

- `apigee-grafana`

A wrapper component on top of [grafana](#), that provides a powerful and elegant way to create, explore, and share dashboards and data with your team and Apigee for troubleshooting.

Install this component on the node where you want to view the dashboard.



# Installing the Monitoring Dashboard

This section describes how to install the Monitoring Dashboard.

## System requirements

You must install `apigee-telegraf` on all the Edge nodes to collect dashboard data. Therefore, the system requirements for `apigee-telegraf` are the same as for the Edge node on which you are installing it.

You can install `apigee-grafana` on a separate node, or reuse one of the existing Edge nodes such as the Management Server or Edge UI node.

For `apigee-influxdb`, you can install it on an existing Edge node, such as the Management Server node or the Edge UI node, with no change to the system requirements.

If you decide to install `apigee-influxdb` on its own node for performance reasons, then the node should have the following requirements:

- 2 core CPU
- 4 GB RAM
- 1000 or more IOPS

See the [InfluxData](#) doc for more information.

## Port requirements for apigee-influxdb

Ports 8086 and 8183 must be open on the `apigee-influxdb` data nodes for access by the node running `apigee-grafana` and `apigee-telegraf`.

## Config files for installing dashboard components

To install the dashboard components, you pass a config file to the `apigee-service` utility. Store these files in the `/tmp` directory, or in a directory accessible by the 'apigee' user, and make them owned by the 'apigee' user.

## Configuration Parameters for apigee-influxdb

Set these properties in a text file that you pass to the `apigee-influxdb setup` command. For example, set them in a text file named `sa_influx.txt`:

Property	Description
INFLUXDB_HOST	IP/DNS of current node.  Example: 192.168.0.1

## Configuration parameters for apigee-telegraf

Set these properties in a text file that you pass to the `apigee-telegraf setup` command. For example, set them in a text file named `sa_telegraf.txt`:

Property	Description
INFLUXDB_URL	Specify the URL of the <code>apigee-influxdb</code> node, including port 8086.  For example:  <code>http://192.168.0.1:8086</code>

## Configuration Parameters for apigee-grafana

Set these properties in a text file that you pass to the `apigee-grafana setup` command. For example, set them in a text file named `sa_grafana.txt`:

Property	Description
INFLUXDB_HOST	Specify the IP address or DNS name of the InfluxDB node.  Example: 192.168.0.1
INFLUXDB_PORT	InfluxDB API port used by Grafana datasource. Specify 8086.
GRAFANA_USERNAME	Grafana username for logging in to the dashboard UI.
GRAFANA_PASSWORD	Grafana password for logging in to the dashboard UI.

## Installation instructions

Follow the instructions below to install the dashboard components in this sequence:

- `apigee-influxdb` (on a central node)
- `apigee-telegraf` (on each node)
- `apigee-grafana` (on a central server)

**Note:** You must have installed the `apigee-service` utility on an Edge node to install the dashboard components. For more information on the `apigee-service` utility, including installation instructions for the utility, see [Installing Edge for the Private Cloud](#).

## Install apigee-influxdb on a single Edge node or standalone node

On a standalone node, or an Edge node running the Management Server or Edge UI:

1. Install `apigee-influxdb`:

```
> /opt/apigee/apigee-service/bin/ apigee-service apigee-influxdb
install
```

2. Create a config file for `apigee-influxdb`. Typically, you store this file in the `/tmp` directory, or in a directory accessible by the 'apigee' user, and make it owned by the 'apigee' user.

Set the following property in the file to the IP address of the `apigee-influxdb` node. This property is described above:

```
INFLUXDB_HOST= influx_IP
```

3. Change the owner to 'apigee':

```
> chown apigee:apigee /tmp/sa_influx.txt
```

4. Configure `apigee-influxdb` using the config file:

```
> /opt/apigee/apigee-service/bin/ apigee-service apigee-influxdb
setup -f /tmp/sa_influx.txt
```

5. Restart `apigee-influxdb`:

```
> /opt/apigee/apigee-service/bin/ apigee-service apigee-influxdb
restart
```

## Install apigee-telegraf on every Edge node

On every node of your Edge installation:

1. On your first Edge node, install `apigee-telegraf`:

```
> /opt/apigee/apigee-service/bin/ apigee-service apigee-telegraf
```

```
install
```

2. Create a config file for `apigee-teleggraf`. Typically, you store this file in the `/tmp` directory, or in a directory accessible by the 'apigee' user, and make it owned by the 'apigee' user.

Set the following property in the file to specify the URL of the `apigee-influxdb` node, including port 8086:

```
INFLUXDB_URL=http:// influx_IP:8086
```

3. Change the owner to 'apigee':

```
> chown apigee:apigee /tmp/sa_telegraf.txt
```

4. Configure `apigee-teleggraf`:

```
> /opt/apigee/apigee-service/bin/ apigee-service apigee-teleggraf  
setup -f /tmp/sa_telegraf.txt
```

5. Restart `apigee-teleggraf`:

```
> /opt/apigee/apigee-service/bin/ apigee-service apigee-teleggraf  
restart
```

6. Repeat this process on all Edge nodes.

## Install apigee-grafana on a single Edge node

On a single node of your Edge installation, such as the Edge UI node:

1. On your first Edge node, install `apigee-grafana`:

```
> /opt/apigee/apigee-service/bin/ apigee-service apigee-grafana  
install
```

2. Create a config file for `apigee-grafana`. Typically, you store this file in the `/tmp` directory, or in a directory accessible by the 'apigee' user, and make it owned by the 'apigee' user.

Set the following properties in the file. These properties are described above:

```
INFLUXDB_HOST=192.168.56.101
```

```
INFLUXDB_PORT=8086
GRAFANA_USERNAME=admin
GRAFANA_PASSWORD=admin
```

3. Change the owner to 'apigee':

```
> chown apigee:apigee /tmp/sa_grafana.txt
```

4. Configure apigee-grafana using the config file:

```
> /opt/apigee/apigee-service/bin/ apigee-service apigee-grafana
setup -f /tmp/sa_grafana.txt
```

5. Restart apigee-grafana:

```
> /opt/apigee/apigee-service/bin/ apigee-service apigee-grafana
restart
```

To access the dashboard, open the following URL in a browser:

```
http://<grafana_IP_or_DNS>:3000
```

Log in by using the credentials you specified in the config file for apigee-grafana . In the example shown above the username/password is admin/admin.

## Troubleshooting installation

If you do not see data appearing in the dashboard, use the following procedure to troubleshoot your installation:

1. To ensure apigee-teleggraf is collecting the data
  - a. Run the apigee-service apigee-teleggraf setup, it's idempotent, check for errors, missing dependencies and resolve them.
  - b. Restart apigee-teleggraf and check /opt/apigee/var/log/apigee-teleggraf/apigee-teleggraf.log for any errors
2. To ensure apigee-influxdb is receiving data:
  - a. Make sure following TCP ports are open on apigee-influxdb data nodes: 8086 and 8183.
  - b. Use the following URL to open the influxdb UI in a browser:

`http://influxdb_IP_or_DNS:8183`

- i. In the Query field, enter "show databases".

Ensure that the following databases were created: `system`, `graphite`, `application`, `events`, `_internal`.

- ii. In the Query field, enter "show servers".

Ensure that you see the `apigee-influxdb` nodes are listed.

3. Check the data sources to the dashboard:

- a. Select **Data Sources** in the main menu. You should see icons for three data sources displayed.
- b. For each data source, select the icon.
- c. In the details page for the data source, select the **Save & Test** button.
- d. If the data source is configured correctly, you should see a message in the form:

**Success**

**Data source is working**