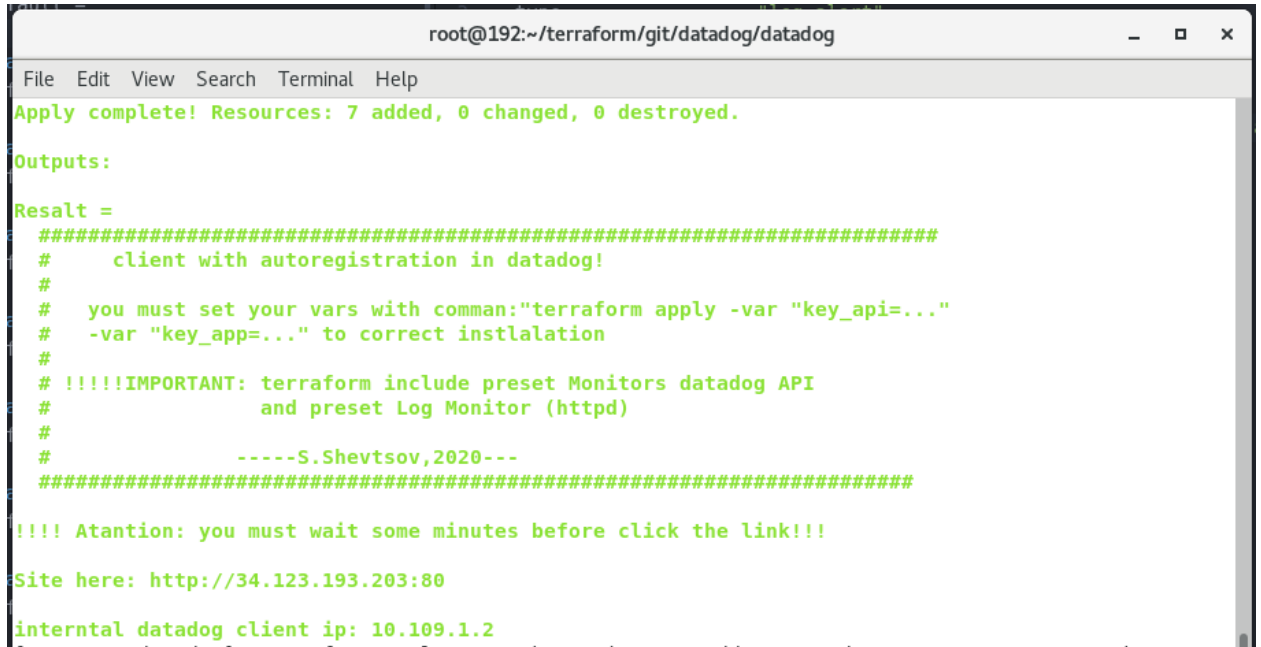


## Datadog home task: Sergei Shevtsov

**WITH EXTRA TASK – auto create Monitor httpd service (in the end of report)!**

You must run terraform command like this: `terraform apply -var 'key_api=5c0a9c85a' -var 'key_app=89a4eaca7cf393'` with yours keys api and app!

**Terraform apply result:**



```
root@192:~/terraform/git/datadog/datadog
File Edit View Search Terminal Help
Apply complete! Resources: 7 added, 0 changed, 0 destroyed.
Outputs:
Result =
#####
#   client with autoregistration in datadog!
#
#   you must set your vars with comman:"terraform apply -var "key_api=..."
#   -var "key_app=..." to correct instlalation
#
#   !!!!!IMPORTANT: terraform include preset Monitors datadog API
#                   and preset Log Monitor (httpd)
#
#                   -----S.Shevtsov,2020---
#####
!!!! Atantion: you must wait some minutes before click the link!!!
Site here: http://34.123.193.203:80
interntal datadog client ip: 10.109.1.2
```

### Task 1: create Log Monitoring and Alert email notification:

Create 2 logs monitoring for httpd and tomcat:

Set **logs\_enabled: true** in datadog.yaml and restart agent!

Create 2 conf.yaml files for every service httpd end tomcat in conf.d/

Check status: `sudo datadog-agent status` :

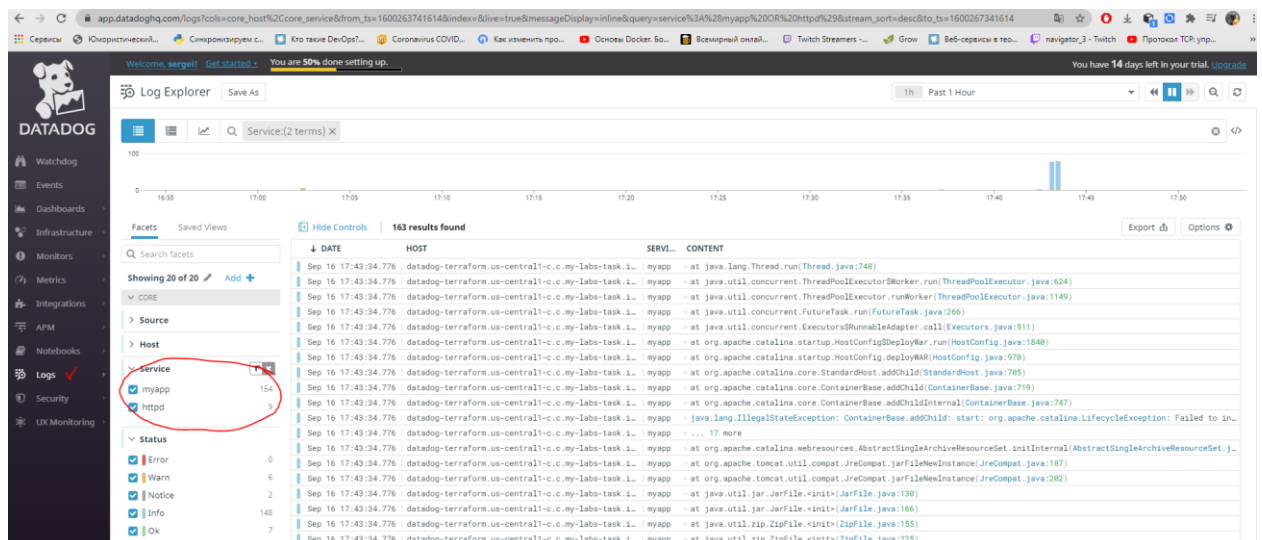
```
=====
Logs Agent
=====

Sending compressed logs in HTTPS to agent-http-intake.logs.datadoghq.com on port
443
BytesSent: 42779
EncodedBytesSent: 4235
LogsProcessed: 106
LogsSent: 106

httpd ✓
-----
Type: file
Path: /etc/httpd/logs/access_log +
Status: OK ✓
Inputs: /etc/httpd/logs/access_log

tomcat ✓
-----
Type: file
Path: /opt/tomcat/apache-tomcat-8.5.57/logs/*.log +
Status: OK ✓
4 files tailed out of 4 files matching
Inputs: /opt/tomcat/apache-tomcat-8.5.57/logs/localhost.2020-09-16.log /opt/tomcat/apache-tomcat-8.5.57/logs/host-manager.2020-09-16.log /opt/tomcat/apache-tomcat-8.5.57/logs/catalina.2020-09-16.log /opt/tomcat/apache-tomcat-8.5.57/logs/manager.2020-09-16.log
```

Go to LogExplorer and check:



Now create Log Monitor – go to “Monitors->New Monitor” and set next settings:

**Log Alert 1**

**Edit Monitor / Logs**

1 **Define the search query**

Q Source:tomcat.X

2 **Set alert conditions**

Trigger when the metric is **above** the threshold during the last **5 minutes**

Alert threshold: **> 30**

Warning threshold: **> 10**

3 **Say what's happening**

Log Alert 1

@sergei\_shevtsov@epam.com

4 **Notify your team**

@sergei\_shevtsov@epam.com

Do not notify alert recipients when this alert is modified

Save

After save Monitor we Deploy some war files in Tomcat to generate logs:

**Log Explorer**

Service:(2 terms)

163 results found

DATE	HOST	SERVICE	CONTENT
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at java.lang.Thread.run(Thread.java:748)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at java.util.concurrent.ThreadPoolExecutor\$Worker.run(ThreadPoolExecutor.java:634)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1149)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at java.util.concurrent.FutureTask.run(FutureTask.java:264)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at java.util.concurrent.Executors\$RunnableAdapter.call(Executors.java:511)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at org.apache.catalina.startup.HostConfig\$DeployWar.run(HostConfig.java:1848)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at org.apache.catalina.startup.HostConfig.deployWAR(HostConfig.java:970)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at org.apache.catalina.core.StandardHost.addChild(StandardHost.java:785)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at org.apache.catalina.core.ContainerBase.addChildInternal(ContainerBase.java:719)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at org.apache.catalina.core.ContainerBase.addChild(ContainerBase.java:747)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	java.lang.IllegalStateException: ContainerBase.addChild: start: org.apache.catalina.LifecycleException: Failed to in...
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	... 17 more
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at org.apache.catalina.webresources.AbstractSingleArchiveResourceSet.initInternal(AbstractSingleArchiveResourceSet.j...
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at org.apache.tomcat.util.compat.JreCompat.jarFileNewInstance(JreCompat.java:187)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at org.apache.tomcat.util.compat.JreCompat.jarFileNewInstance(JreCompat.java:282)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at java.util.jar.JarFile.<init>(JarFile.java:138)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at java.util.jar.JarFile.<init>(JarFile.java:166)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at java.util.zip.ZipFile.<init>(ZipFile.java:155)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at java.util.zip.ZipFile.<init>(ZipFile.java:225)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at java.util.zip.ZipFile.open(Native Method)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	Caused by: java.util.zip.ZipException: zip file is empty
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	... 16 more
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at org.apache.catalina.util.LifecycleBase.init(LifecycleBase.java:136)
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	at org.apache.catalina.webresources.AbstractSingleArchiveResourceSet.initInternal(AbstractSingleArchiveResourceSet.j...
Sep 16 17:43:34.776	datadog-terraform-us-central1-c-c.my-labs-task-1	myapp	Caused by: java.lang.IllegalArgumentException: java.util.zip.ZipException: zip file is empty

## Return to Log Monitor – 154 new lines!!!

Log Alert 1

Edit Monitor / Logs

4h Past 4 Hours

1 Define the search query

Source: tomat X

Count group by (everything)

Simple alert, triggers a single alert when a threshold is reached. Group by a facet to enable separate alerts by groups.

2 Set alert conditions

Trigger when the metric is above the threshold during the last 5 minutes

Alert threshold: > 30

Warning threshold: > 10

3 Say what's happening

Log Alert 1

@sergel\_shevtsov@epam.com

Manage Monitors

Filter monitors

Showing all 3 results

Status	Name	Tags
Triggered	DataDog Alert CPU	
Alert	Log Alert 1	
OK	[Auto] Clock in sync with NTP	

Check e-mail that notification is work:

## [Monitor Alert] Triggered: Log Alert 1

Datadog Alerting <alert@datadog.co>  
16.09.2020, Cp, 17:45  
Komy: Sergei Shevtsov



[Triggered] Log Alert 1

[@sergei\\_shevtsov@epam.com](mailto:sergei_shevtsov@epam.com)

More than 10 log events matched in the last 5m against the monitored query: [source:tomcat](#)

The monitor was last triggered at Wed Sep 16 2020 14:45:36 UTC.

[\[Monitor Status\]](#) · [\[Edit Monitor\]](#) · [\[Related Logs\]](#)

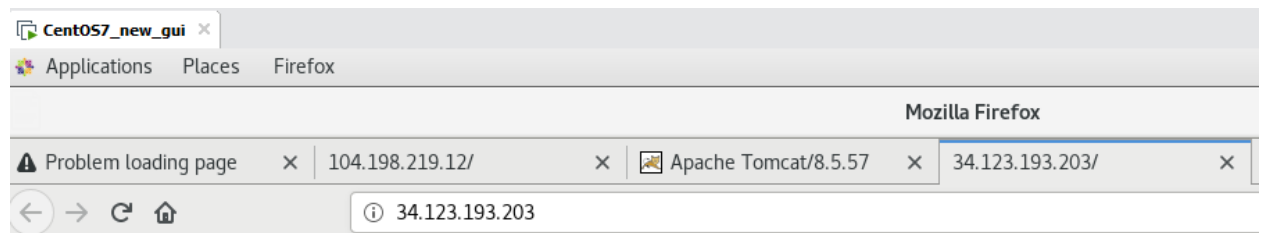
This alert was raised by account home

### Sample Logs:

Time	Host
14:43:34 UTC	datadog-terraform.us-central1-c.c.my-labs-task.internal
at java.lang.Thread.run(Thread.java:748)	
14:43:34 UTC	datadog-terraform.us-central1-c.c.my-labs-task.internal
at java.util.concurrent.ThreadPoolExecutor\$Worker.run(ThreadPoolExecutor.java:624)	
14:43:34 UTC	datadog-terraform.us-central1-c.c.my-labs-task.internal
at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1149)	
14:43:34 UTC	datadog-terraform.us-central1-c.c.my-labs-task.internal
at java.util.concurrent.FutureTask.run(FutureTask.java:266)	
14:43:34 UTC	datadog-terraform.us-central1-c.c.my-labs-task.internal
at java.util.concurrent.Executors\$RunnableAdapter.call(Executors.java:511)	
14:43:34 UTC	datadog-terraform.us-central1-c.c.my-labs-task.internal
at org.apache.catalina.startup.HostConfig\$DeployWar.run(HostConfig.java:1840)	
14:43:34 UTC	datadog-terraform.us-central1-c.c.my-labs-task.internal
at org.apache.catalina.startup.HostConfig.deployWAR(HostConfig.java:970)	
14:43:34 UTC	datadog-terraform.us-central1-c.c.my-labs-task.internal
at org.apache.catalina.core.StandardHost.addChild(StandardHost.java:705)	
14:43:34 UTC	datadog-terraform.us-central1-c.c.my-labs-task.internal
at org.apache.catalina.core.ContainerBase.addChild(ContainerBase.java:719)	
14:43:34 UTC	datadog-terraform.us-central1-c.c.my-labs-task.internal
at org.apache.catalina.core.ContainerBase.addChildInternal(ContainerBase.java:747)	
14:43:34 UTC	datadog-terraform.us-central1-c.c.my-labs-task.internal
java.lang.IllegalStateException: ContainerBase.addChild: start: org.apache.catalina.LifecycleException: Failed to initialize component [org.apache.catalina.webresources.WarResourceSet@66b65d33]	
14:43:34 UTC	datadog-terraform.us-central1-c.c.my-labs-task.internal

## Task 2: create Web Monitor:

Create config to monitoring httpd my simpl site and restart agent:



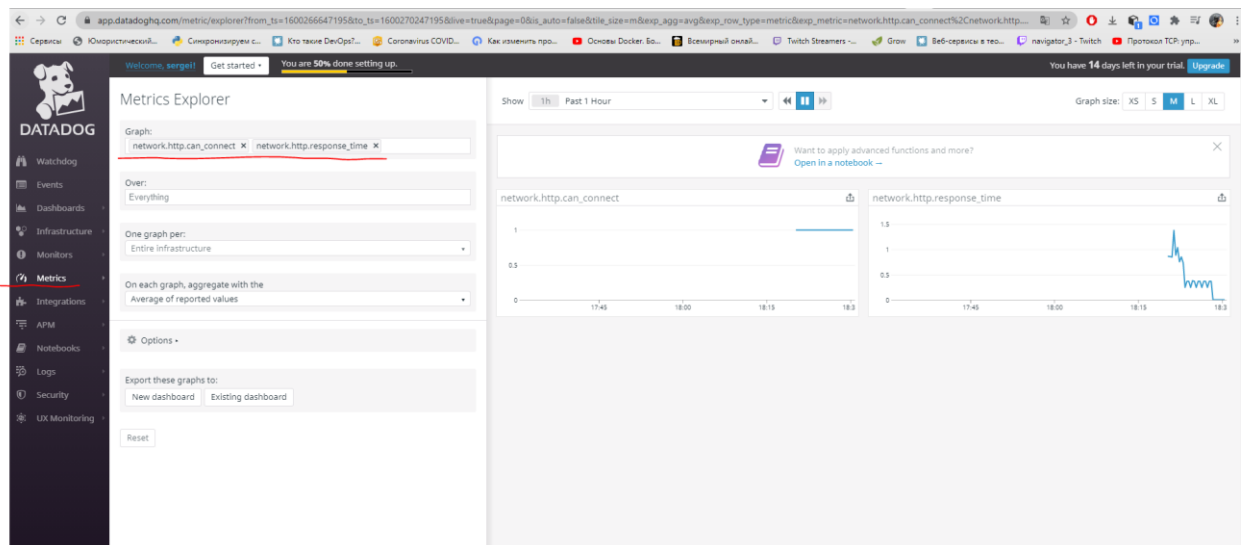
Hello from Sergei Shevtsov!!!

```
root@datadog-terraform:/etc/datadog-agent/conf.d/http_check.d - Google Chrome
ssh.cloud.google.com/projects/my-labs-task/zones/us-central1-c/instances/datadog-terraform?useAdminProxy=true&authuser=0&...
instances:

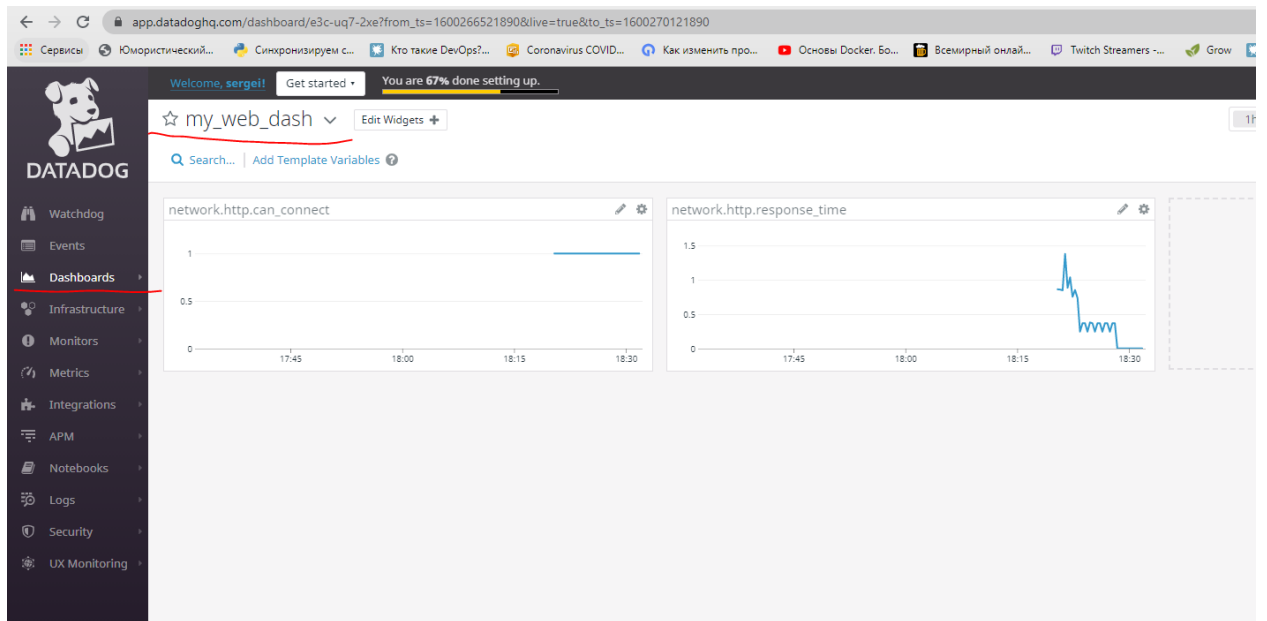
## @param name - string - required
## Name of your Http check instance.
#
- name: my_site

## @param url - string - required
## Url to check
## Non-standard ports are supported using http://hostname:port syntax
#
url: http://104.198.219.12
```

Go to Metrics and set two graphs:



Then add them to new dashboard:



No create Metric with notification:

The screenshot shows the 'New Monitor / Metric' configuration page in Datadog. The page is divided into three main sections: 1. Choose the detection method, 2. Define the metric, and 3. Set alert conditions.

**1. Choose the detection method:** The 'Threshold Alert' tab is selected. A description states: 'An alert is triggered whenever a metric crosses a threshold.'

**2. Define the metric:** The metric is defined as 'Metric network.http.can\_connect from everywhere excluding (none) avg by: (everything)'.

**3. Set alert conditions:** The configuration includes the following thresholds:

- Trigger when the metric is **below** the threshold **at least once** during the last **1 minute**.
- Alert threshold: **< 1**
- Warning threshold: **< 0**
- Alert recovery threshold: **>= 1**
- Warning recovery threshold: **Optional**

Warning recovery threshold:

Require  [?](#)

Note: We highly recommend you select "Do Not Require" for sparse metrics, otherwise some evaluations will be skipped.

Do not notify  [?](#)

Note: We recommend the missing data window be at least 2x the evaluation period above

[Never]  [?](#)

Delay evaluation by  seconds [?](#)

4 Say what's happening [Use message template variables](#) [Markdown Formatting Help](#) [?](#)

[Preview](#) [Edit](#)

HTTP connection lose

@sergei\_shevtsov@epam.com

Tags:

[Never]  [?](#)

5 Notify your team [?](#)

[X](#) [?](#)

Do not notify  [?](#)

For example check log Monitoring to my site:

app.datadoghq.com/logs?cols=core\_host%2Ccore\_service&from\_ts=1600269872297&index=&live=true&messageDisplay=inline&query=source%3Ahttpd&stream\_sort=time%2Cdesc&to\_ts=160027072297

Welcome, sergei! Get started  You have 14 days left in your trial. [Upgrade](#)

Log Explorer [Save As](#)   [⏮](#) [⏸](#) [⏭](#) [🔍](#) [🔗](#)

Facets [Saved Views](#) [Hide Controls](#) **59 results found** [Export](#) [Options](#)

Search facets

Showing 20 of 20 [Add](#) [+](#)

CORE

Source  59

Host

Service

Status

Error 0

Warn 0

DATE	HOST	SERVI...	CONTENT
Sep 16 18:39:05.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:39:05 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:38:50.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:38:50 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:38:35.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:38:35 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:38:20.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:38:20 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:38:05.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:38:05 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:37:50.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:37:50 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:37:35.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:37:35 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:37:20.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:37:20 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:37:05.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:37:05 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:36:50.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:36:50 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:36:35.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:36:35 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:36:20.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:36:20 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:36:05.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:36:05 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:35:50.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:35:50 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:35:35.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:35:35 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"
Sep 16 18:35:20.000	datadog-terraform-us-central1-c.c.my-labs-task.i...	httpd	- 104.198.219.12 - - [16/Sep/2020:15:35:20 +0000] "GET / HTTP/1.1" 200 14 "-" "Datadog Agent/7.22.0"

No stop httpd and check:

app.datadoghq.com/metric/explorer?from\_ts=1600264366065&to\_ts=1600285286065&live=true&page=0&is\_auto=false&size=m&exp\_agg=avg&exp\_row\_type=metric&exp\_metric=network.http.can\_connect%2Cnetwork.http.response\_time

Welcome, sergei! Get started  You have 14 days left in your trial. [Upgrade](#)

Metrics Explorer

Graphs:

Over:

One graph per:

On each graph, aggregate with the:

Options [+](#)

Export these graphs to:

[Reset](#)

Show   [⏮](#) [⏸](#) [⏭](#) [🔍](#) [🔗](#) [Graph size: XS S M L XL](#)

Want to apply advanced functions and more? [Open in a notebook](#) [→](#)

network.http.can\_connect

network.http.response\_time



Check e-mail:

Datadog Alerting <alert@datadog.com>

6.09.2020, Ср, 22:42

From: Sergei Shevtsov

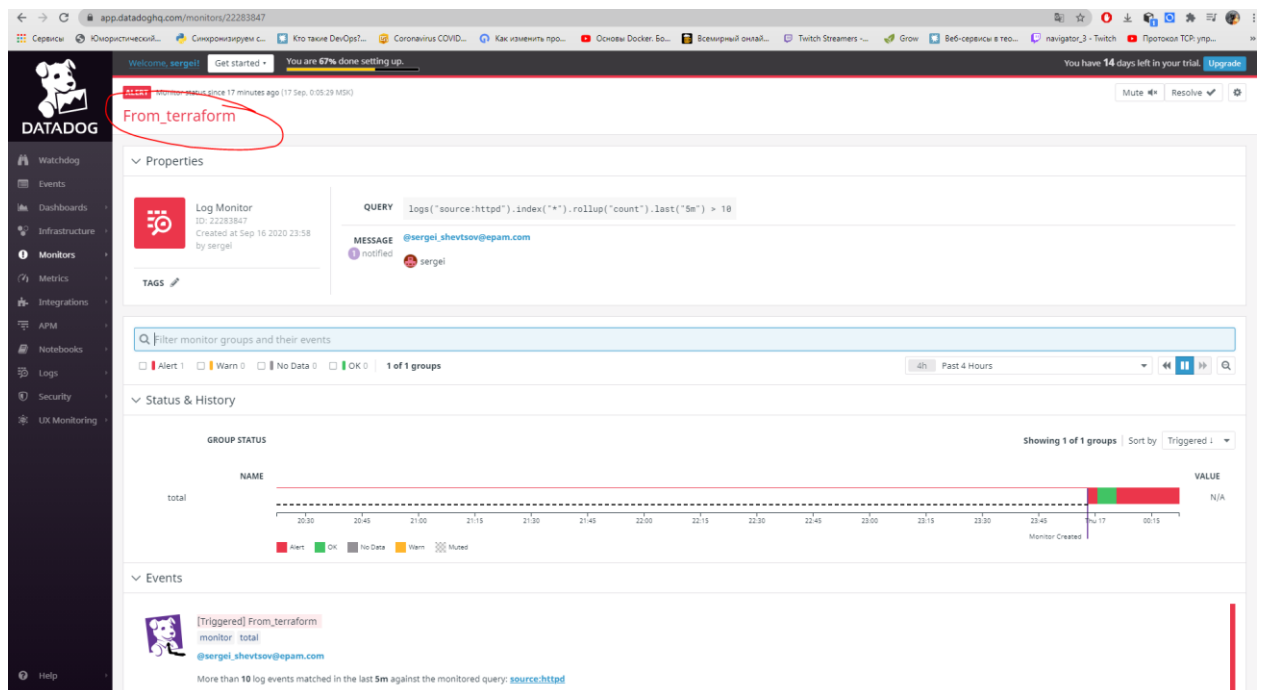
## EXTRA TASK:

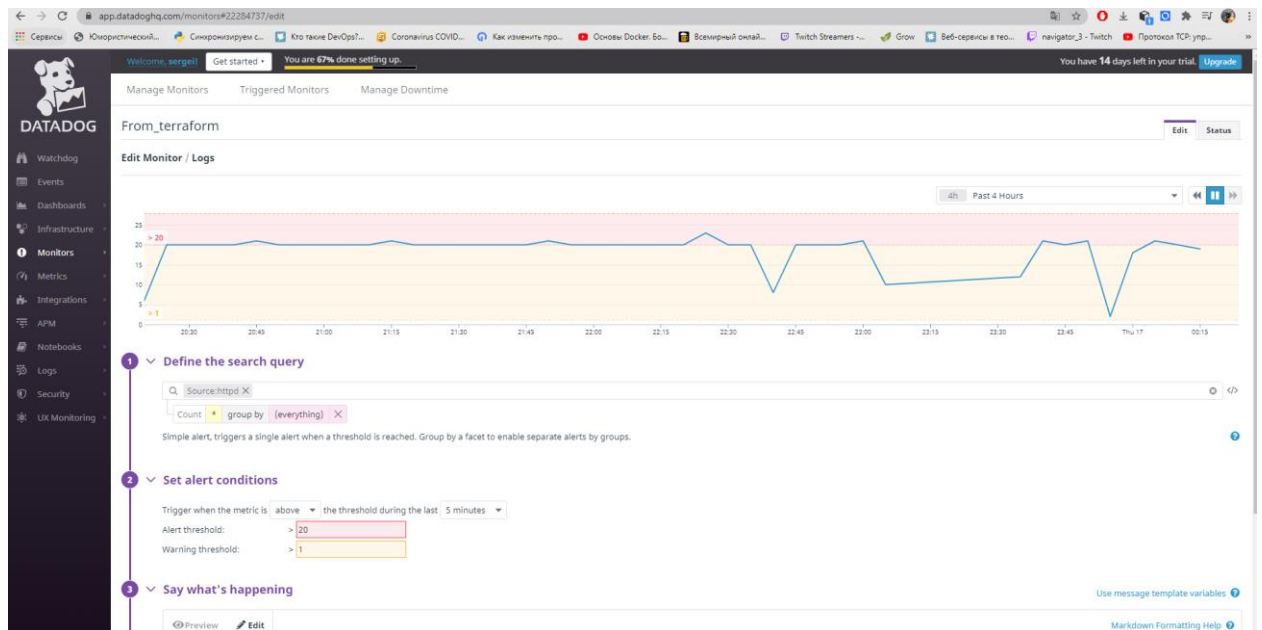
Use terraform script to create Monitor in datadog that will check log file httpd service

And web connection:

```
1 resource "datadog_monitor" "foo" {
2   name           = "From_terraform"
3   type           = "log alert"
4   message        = "@sergei_shevtsov@epam.com"
5   escalation_message = "Escalation message @pagerduty"
6
7   query = "logs(\"source:httpd\").index(\"*\").rollup(\"count\").last(\"5m\") > 20"
8
9 }
10
```

And result in datadog:





Web connection:

