Launching an Apache Server on EC2

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- Let's leverage our EC2 instance

- We'll install an Apache Web Server to display a web page
- We'll create an index.html that shows the hostname of our machine

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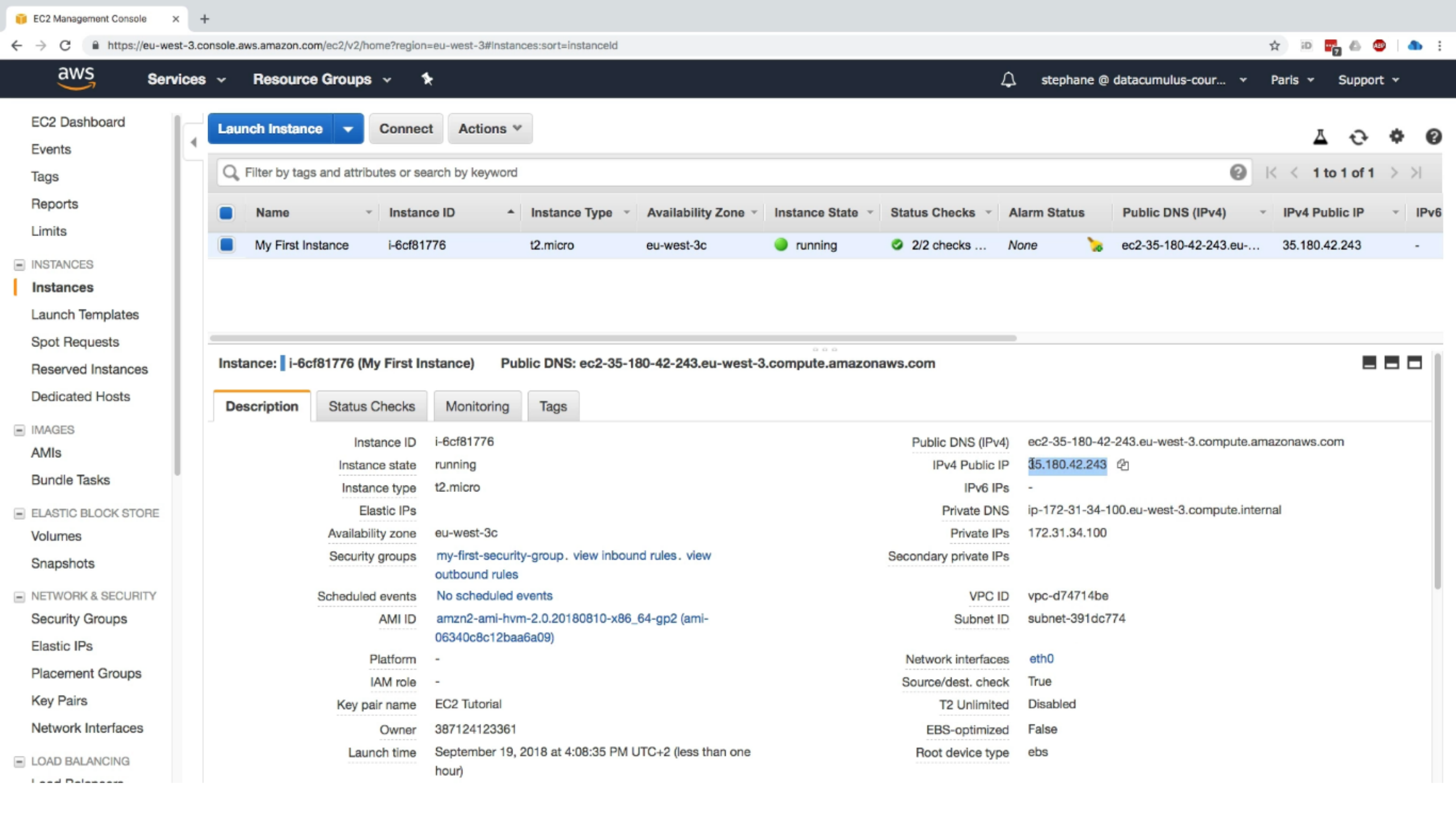
EC2 Management Console
https://eu-west-3.console.aws.amazon.com/ec2/v2/home?region=eu-west-3#Instances:sort=instanceId
aws
Services
Resource Groups
stephane @ datacumulus-cour...
Paris
Support
EC2 Dashboard
Events
Tags
Reports
Limits
INSTANCES
Instances
Launch Templates
Spot Requests
Reserved Instances
Dedicated Hosts
IMAGES
AMIs
Bundle Tasks
ELASTIC BLOCK STORE
Volumes
Snapshots
NETWORK & SECURITY
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Launch Instance
Connect
Actions
Filter by tags and attributes or search by keyword
1 to 1 of 1
Name
Instance ID
Instance Type
Availability Zone
Instance State
Status Checks
Alarm Status
Public DNS (IPv4)
IPv4 Public IP
IPv6
My First Instance
i-6cf81776
t2.micro
eu-west-3c
running
2/2 checks ...
None
ec2-35-180-42-243.eu-...
35.180.42.243
-
Instance: i-6cf81776 (My First Instance)
Public DNS: ec2-35-180-42-243.eu-west-3.compute.amazonaws.com
Description
Status Checks
Monitoring
Tags
Instance ID
i-6cf81776
Instance state
running
Instance type
t2.micro
Elastic IPs
Availability zone
eu-west-3c
Security groups
my-first-security-group. view inbound rules. view outbound rules
Scheduled events
No scheduled events
AMI ID
amzn2-ami-hvm-2.0.20180810-x86_64-gp2 (ami-06340c8c12baa6a09)
Platform
-
IAM role
-
Key pair name
EC2 Tutorial
Owner
387124123361
Launch time
September 19, 2018 at 4:08:35 PM UTC+2 (less than one hour)
Public DNS (IPv4)
ec2-35-180-42-243.eu-west-3.compute.amazonaws.com
IPv4 Public IP
35.180.42.243
IPv6 IPs
-
Private DNS
ip-172-31-34-100.eu-west-3.compute.internal
Private IPs
172.31.34.100
Secondary private IPs
VPC ID
vpc-d74714be
Subnet ID
subnet-391dc774
Network interfaces
eth0
Source/dest. check
True
T2 Unlimited
Disabled
EBS-optimized
False
Root device type
ebs

```
✘ ~/aws-course ssh -i EC2Tutorial.pem  ec2-user@35.180.42.243
The authenticity of host '35.180.42.243 (35.180.42.243)' can't be established.
ECDSA key fingerprint is SHA256:gLqFnUlIDsBNQZFkmzJLGNRTry2CbQ8L2N3ZUU0DTYQ.
Are you sure you want to continue connecting (yes/no)? 
```

```
[ec2-user@ip-172-31-34-100 ~]$ sudo su
[root@ip-172-31-34-100 ec2-user]#
```

This Is done to elevate the user so that they can work on the EC2 Instance

```
[ec2-user@ip-172-31-34-100 ~]$ sudo su
[root@ip-172-31-34-100 ec2-user]# yum update -y
```

```
Dependencies Resolved

================================================================================
 Package                Arch          Version                   Repository   Size
================================================================================
Installing:
 kernel                 x86_64        4.14.67-71.56.amzn2       amzn2-core   19 M
Updating:
 amazon-ssm-agent       x86_64        2.3.50.0-1.amzn2          amzn2-core   14 M
 dbus                   x86_64        1:1.10.24-7.amzn2         amzn2-core  247 k
 dbus-libs              x86_64        1:1.10.24-7.amzn2         amzn2-core  169 k
 kernel-tools           x86_64        4.14.67-71.56.amzn2       amzn2-core  109 k
 libsemanage            x86_64        2.5-11.amzn2              amzn2-core  152 k
 mariadb-libs           x86_64        1:5.5.60-1.amzn2          amzn2-core  770 k
 policycoreutils        x86_64        2.5-22.amzn2              amzn2-core  867 k
 yum                    noarch        3.4.3-158.amzn2.0.2       amzn2-core  1.2 M

Transaction Summary
================================================================================
Install   1 Package
Upgrade   8 Packages

Total download size: 36 M
Downloading packages:
Delta RPMs disabled because /usr/bin/applydeltarpm not installed.
(1/9): dbus-1.10.24-7.amzn2.x86_64.rpm                      | 247 kB  00:00:00
(2/9): dbus-libs-1.10.24-7.amzn2.x86_64.rpm                 | 169 kB  00:00:00
```

```
[root@ip-172-31-34-100 ec2-user]# yum install -y httpd.x86_64
```

```
  Installing : apr-1.6.3-5.amzn2.x86_64                                    1/9
  Installing : apr-util-bdb-1.6.1-5.amzn2.x86_64                           2/9
  Installing : apr-util-1.6.1-5.amzn2.x86_64                               3/9
  Installing : httpd-tools-2.4.34-1.amzn2.1.0.x86_64                       4/9
  Installing : generic-logos-httpd-18.0.0-4.amzn2.noarch                   5/9
  Installing : mailcap-2.1.41-2.amzn2.noarch                               6/9
  Installing : httpd-filesystem-2.4.34-1.amzn2.1.0.noarch                  7/9
  Installing : mod_http2-1.10.18-1.amzn2.0.x86_64                          8/9
  Installing : httpd-2.4.34-1.amzn2.1.0.x86_64                             9/9
  Verifying  : apr-1.6.3-5.amzn2.x86_64                                    1/9
  Verifying  : apr-util-1.6.1-5.amzn2.x86_64                               2/9
  Verifying  : httpd-filesystem-2.4.34-1.amzn2.1.0.noarch                  3/9
  Verifying  : mod_http2-1.10.18-1.amzn2.0.x86_64                          4/9
  Verifying  : httpd-tools-2.4.34-1.amzn2.1.0.x86_64                       5/9
  Verifying  : httpd-2.4.34-1.amzn2.1.0.x86_64                             6/9
  Verifying  : mailcap-2.1.41-2.amzn2.noarch                               7/9
  Verifying  : generic-logos-httpd-18.0.0-4.amzn2.noarch                   8/9
  Verifying  : apr-util-bdb-1.6.1-5.amzn2.x86_64                           9/9

Installed:
  httpd.x86_64 0:2.4.34-1.amzn2.1.0

Dependency Installed:
  apr.x86_64 0:1.6.3-5.amzn2                  apr-util.x86_64 0:1.6.1-5.amzn2              apr-util-bdb.x86_64 0:1.6.1-5.amzn2
  generic-logos-httpd.noarch 0:18.0.0-4.amzn2 httpd-filesystem.noarch 0:2.4.34-1.amzn2.1.0 httpd-tools.x86_64 0:2.4.34-1.amzn2.1.0
  mailcap.noarch 0:2.1.41-2.amzn2             mod_http2.x86_64 0:1.10.18-1.amzn2.0

Complete!
[root@ip-172-31-34-100 ec2-user]#
```

```
[root@ip-172-31-34-100 ec2-user]# systemctl start httpd.service
[root@ip-172-31-34-100 ec2-user]# systemctl enable httpd.service
```

```
[root@ip-172-31-34-100 ec2-user]# curl localhost:8
```

```
                                        <p>If you would like to let the administrators of this website know that you've seen this page i
nstead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website'
s domain should reach the appropriate person.</p>

                                        <p>For example, if you experienced problems while visiting www.example.com, you should send e-ma
il to "webmaster@example.com".</p>

                                        <hr />
                                </div>

                                <div class="content-column-right">
                                        <h2>If you are the website administrator:</h2>

                                        <p>You may now add content to the directory <tt>/var/www/html/</tt>. Note that until you do so,
people visiting your website will see this page, and not your content. To prevent this page from ever being used, follow the instruction
s in the file <tt>/etc/httpd/conf.d/welcome.conf</tt>.</p>

                                        <p>You are free to use the image below on web sites powered by the Apache HTTP Server:</p>

                                        <p align="center"><a href="http://httpd.apache.org/"><img src="/icons/apache_pb2.gif" alt="[ Pow
ered by Apache ]"/></a></p>

                                </div>
                        </div>
                </div>
        </body>
</html>
[root@ip-172-31-34-100 ec2-user]#
```

EC2 Management Console

https://eu-west-3.console.aws.amazon.com/ec2/v2/home?region=eu-west-3#Instances:sort=instanceId

aws Services Resource Groups stephane @ datacumulus-cour... Paris Support

- EC2 Dashboard
- Events
- Tags
- Reports
- Limits
- INSTANCES
- Instances
- Launch Templates
- Spot Requests
- Reserved Instances
- Dedicated Hosts
- IMAGES
- AMIs
- Bundle Tasks
- ELASTIC BLOCK STORE
- Volumes
- Snapshots
- NETWORK & SECURITY
- Security Groups
- Elastic IPs
- Placement Groups
- Key Pairs
- Network Interfaces
- LOAD BALANCING

Launch Instance | Connect | Actions

Filter by tags and attributes or search by keyword

1 to 1 of 1

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6
My First Instance	i-6cf81776	t2.micro	eu-west-3c	running	2/2 checks ...	None	ec2-35-180-42-243.eu-...	35.180.42.243	-

Instance: i-6cf81776 (My First Instance) **Public DNS: ec2-35-180-42-243.eu-west-3.compute.amazonaws.com**

Description | Status Checks | Monitoring | Tags

Instance ID	i-6cf81776	Public DNS (IPv4)	ec2-35-180-4...zonaws.com
Instance state	running	IPv4 Public IP	35.180.42.243
Instance type	t2.micro	IPv6 IPs	-
Elastic IPs		Private DNS	ip-172-31-34-100.eu-west-3.compute.internal
Availability zone	eu-west-3c	Private IPs	172.31.34.100
Security groups	my-first-security-group. view inbound rules. view outbound rules	Secondary private IPs	
Scheduled events	No scheduled events	VPC ID	vpc-d74714be
AMI ID	amzn2-ami-hvm-2.0.20180810-x86_64-gp2 (ami-06340c8c12baa6a09)	Subnet ID	subnet-391dc774
Platform	-	Network interfaces	eth0
IAM role	-	Source/dest. check	True
Key pair name	EC2 Tutorial	T2 Unlimited	Disabled
Owner	387124123361	EBS-optimized	False
Launch time	September 19, 2018 at 4:08:35 PM UTC+2 (less than one hour)	Root device type	ebs

Copy to clipboard

Feedback English (US)

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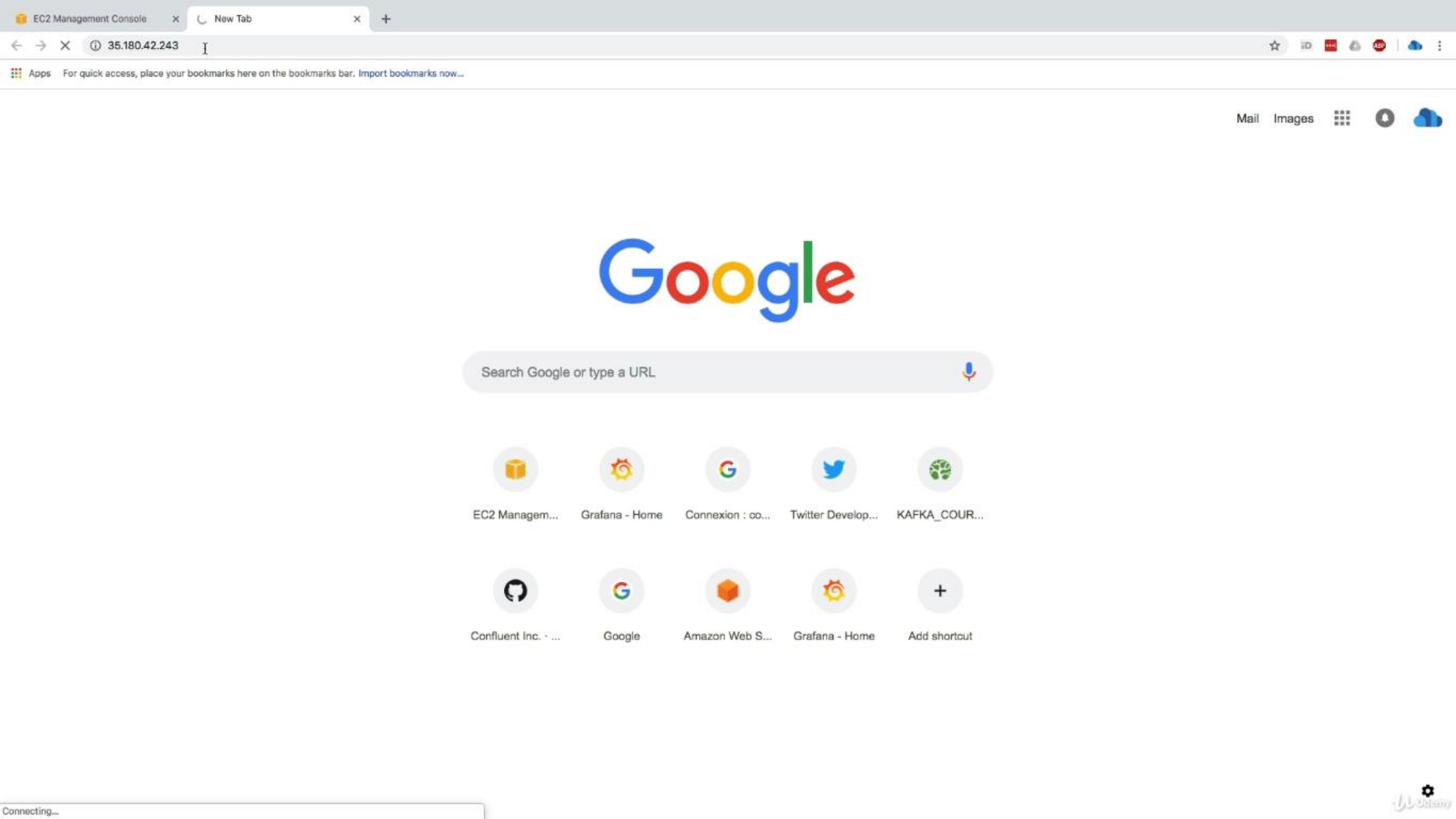
EC2 Management Console
New Tab
35.180.42.243
Apps
For quick access, place your bookmarks here on the bookmarks bar. Import bookmarks now...
Mail
Images
Google
Search Google or type a URL
EC2 Managem...
Grafana - Home
Connexion : co...
Twitter Develop...
KAFKA_COUR...
Confluent Inc. · ...
Google
Amazon Web S...
Grafana - Home
Add shortcut
Connecting...

EC2 Management Console | New Tab

https://eu-west-3.console.aws.amazon.com/ec2/v2/home?region=eu-west-3#Instances:sort=instanceId

aws | Services | Resource Groups | stephane @ datacumulus-cour... | Paris | Support

- EC2 Dashboard
- Events
- Tags
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- Instances
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Launch Instance | Connect | Actions

Filter by tags and attributes or search by keyword | 1 to 1 of 1

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6
My First Instance	i-6cf81776	t2.micro	eu-west-3c	running	2/2 checks ...	None	ec2-35-180-42-243.eu-...	35.180.42.243	-

Instance: i-6cf81776 (My First Instance) **Public DNS: ec2-35-180-42-243.eu-west-3.compute.amazonaws.com**

Description | Status Checks | Monitoring | Tags

Instance ID	i-6cf81776	Public DNS (IPv4)	ec2-35-180-42-243.eu-west-3.compute.amazonaws.com
Instance state	running	IPv4 Public IP	35.180.42.243
Instance type	t2.micro	IPv6 IPs	-
Elastic IPs		Private DNS	ip-172-31-34-100.eu-west-3.compute.internal
Availability zone	eu-west-3c	Private IPs	172.31.34.100
Security groups	my-first-security-group. view inbound rules. view outbound rules	Secondary private IPs	
Scheduled events	No scheduled events		714be
AMI ID	amzn2-ami-hvm-2.0.201 06340c8c12baa6a09)		91dc774
Platform	-		
IAM role	-	Source/dest. check	True
Key pair name	EC2 Tutorial	T2 Unlimited	Disabled
Owner	387124123361	EBS-optimized	False
Launch time	September 19, 2018 at 4:08:35 PM UTC+2 (less than one hour)	Root device type	ebs

Security Groups associated with i-6cf81776

Ports	Protocol	Source	my-first-security-group
22	tcp	0.0.0.0/0	✔

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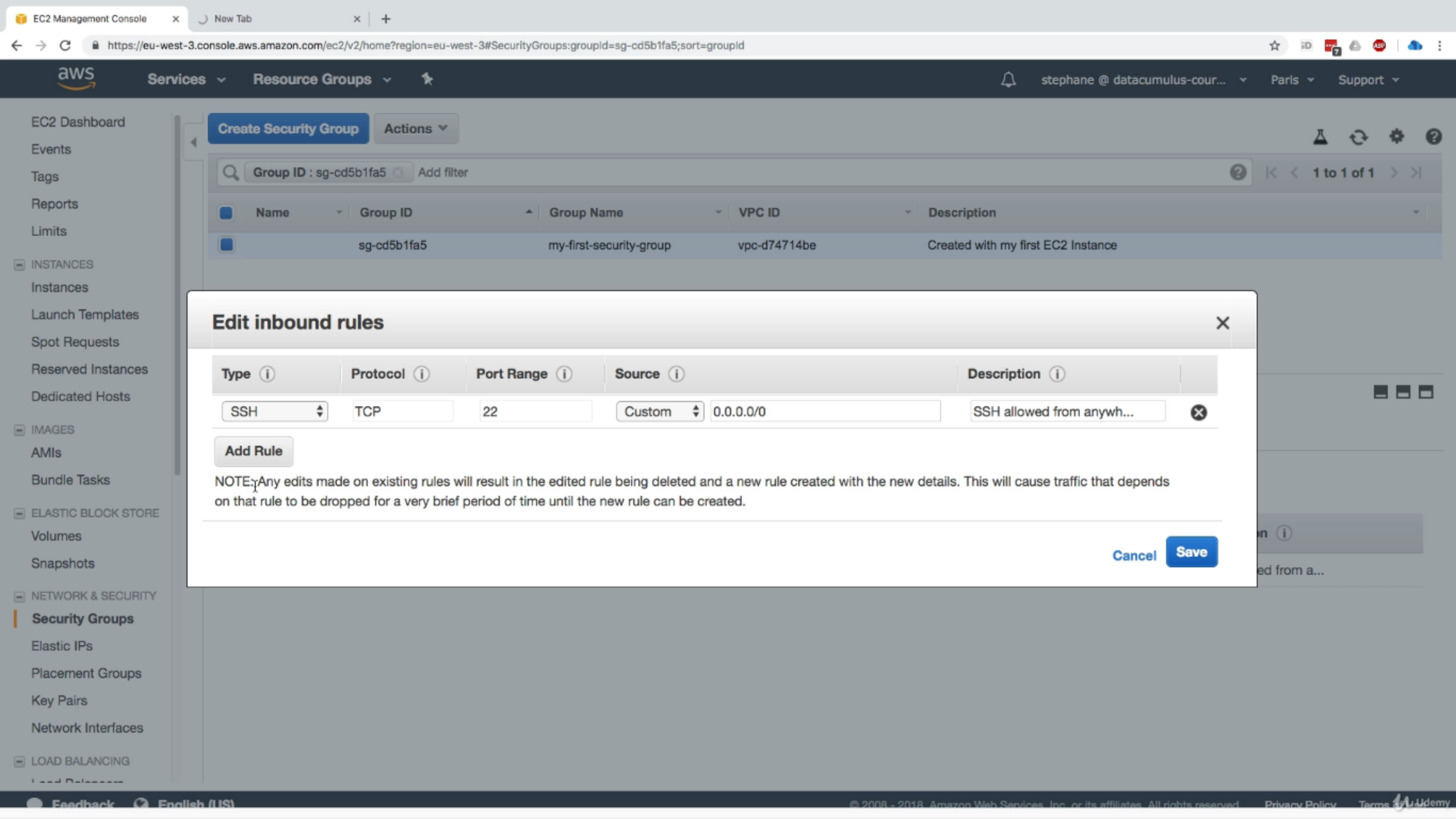
EC2 Management Console
New Tab
https://eu-west-3.console.aws.amazon.com/ec2/v2/home?region=eu-west-3#SecurityGroups:groupId=sg-cd5b1fa5;sort=groupId
aws
Services
Resource Groups
stephane @ datacumulus-cour...
Paris
Support
EC2 Dashboard
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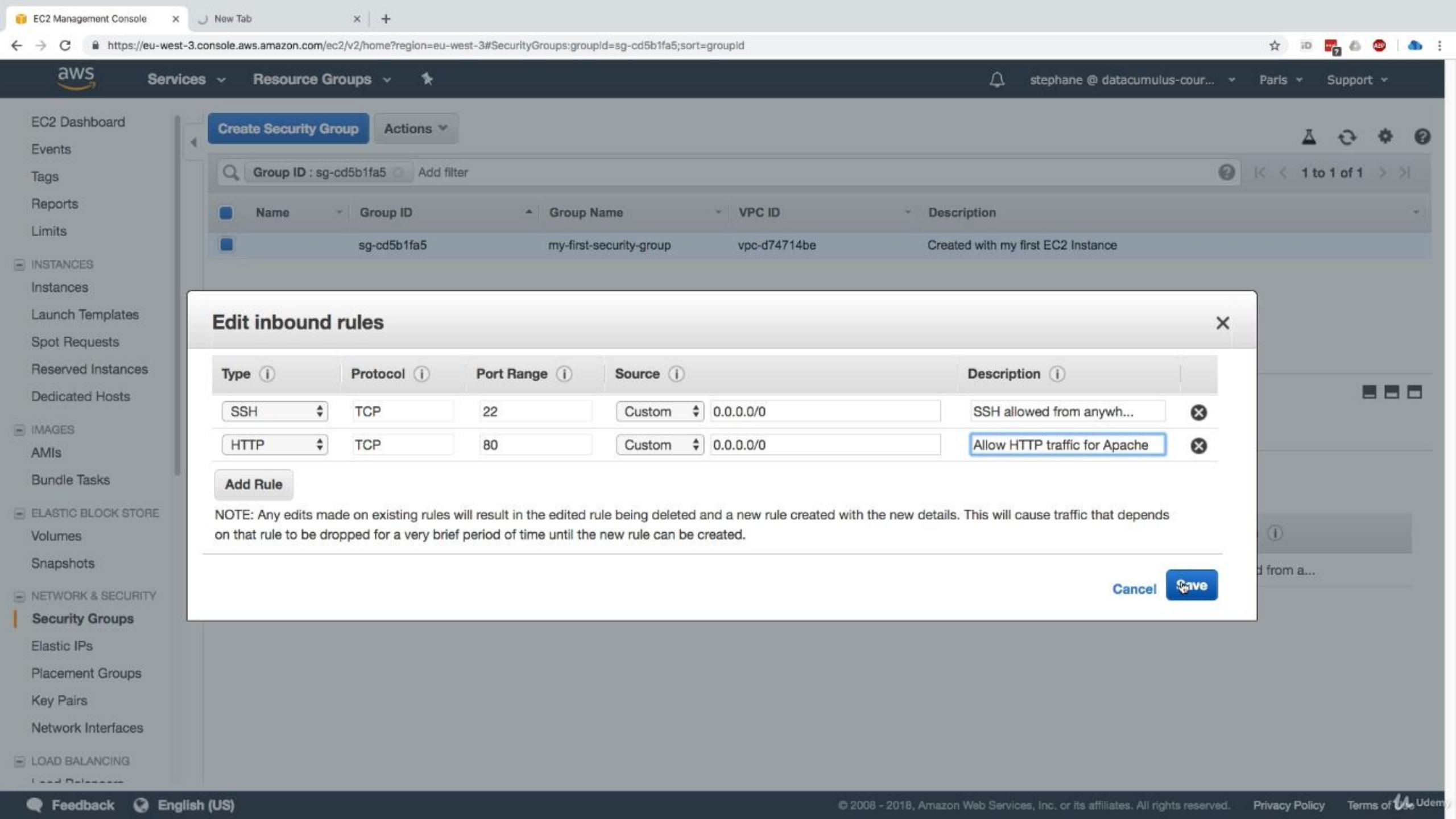
NETWORK & SECURITY
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
LOAD BALANCING
Create Security Group
Actions
Group ID : sg-cd5b1fa5
Add filter
1 to 1 of 1
Name
Group ID
Group Name
VPC ID
Description
sg-cd5b1fa5
my-first-security-group
vpc-d74714be
Created with my first EC2 Instance
Edit inbound rules
Type
Protocol
Port Range
Source
Description
SSH
TCP
22
Custom
0.0.0.0/0
SSH allowed from anywh...
Add Rule
NOTE: Any edits made on existing rules will result in the edited rule being deleted and a new rule created with the new details. This will cause traffic that depends on that rule to be dropped for a very brief period of time until the new rule can be created.
Cancel
Save
Feedback
English (US)
Privacy Policy
Terms of Use


EC2 Management Console
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https://eu-west-3.console.aws.amazon.com/ec2/v2/home?region=eu-west-3#SecurityGroups:groupId=sg-cd5b1fa5;sort=groupId
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LOAD BALANCING
Create Security Group
Actions
Group ID : sg-cd5b1fa5
Add filter
1 to 1 of 1
Name
Group ID
Group Name
VPC ID
Description
sg-cd5b1fa5
my-first-security-group
vpc-d74714be
Created with my first EC2 Instance
Edit inbound rules
Type
Protocol
Port Range
Source
Description
SSH
TCP
22
Custom
0.0.0.0/0
SSH allowed from anywh...
HTTP
TCP
80
Custom
0.0.0.0/0
Allow HTTP traffic for Apache
Add Rule
NOTE: Any edits made on existing rules will result in the edited rule being deleted and a new rule created with the new details. This will cause traffic that depends on that rule to be dropped for a very brief period of time until the new rule can be created.
Cancel
Save
Feedback
English (US)
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EC2 Management Console | Test Page for the Apache HTTP

Not Secure | 35.180.42.243

Test Page

This page is used to test the proper operation of the Apache HTTP server after it has been installed. If you can read this page, it means that the Apache HTTP server installed at this site is working properly.

If you are a member of the general public:

The fact that you are seeing this page indicates that the website you just visited is either experiencing problems, or is undergoing routine maintenance.

If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.

For example, if you experienced problems while visiting www.example.com, you should send e-mail to "webmaster@example.com".

If you are the website administrator:

You may now add content to the directory `/var/www/html/`. Note that until you do so, people visiting your website will see this page, and not your content. To prevent this page from ever being used, follow the instructions in the file `/etc/httpd/conf.d/welcome.conf`.

You are free to use the image below on web sites powered by the Apache HTTP Server: