Building your own Faucet

Creating the instance

To build your own Faucet you first need a server. We recommend you to set up an Amazon one. If you don't have one you can create one following these instructions:

http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-launch-instance_linux.html

Installing the LAMP services

Once you have created the instance and your are sure it works properly you need to set up your web server. To do so you will need the LAMP package (Linux, Apache, MySQL and PHP). follow these instructions to configure yours:
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/install-LAMP.html

Setting up the FTP

Now you need to set the FTP so you can transfer the files.

Step #1: Install vsftpd

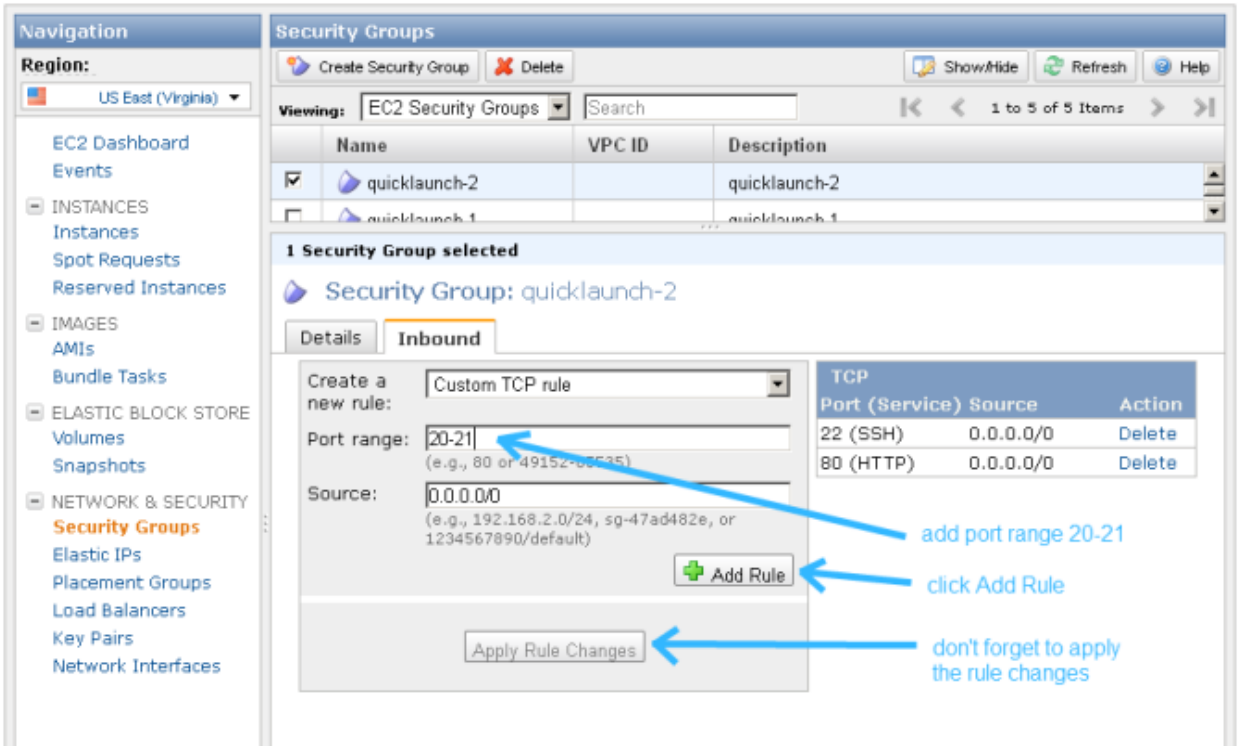
SSH to your EC2 server. Type:

```
> sudo yum install vsftpd
```

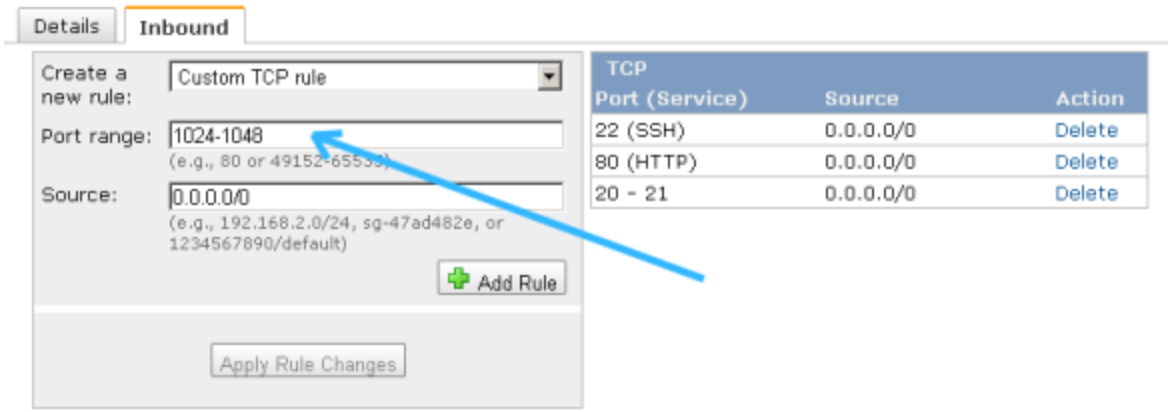
This should install vsftpd.

Step #2: Open up the FTP ports on your EC2 instance

Next, you'll need to open up the FTP ports on your EC2 server. Log in to the AWS EC2 Management Console and select Security Groups from the navigation tree on the left. Select the security group assigned to your EC2 instance. Select the Inbound tab and add port range 20-21:



Also add port range 1024-1048:



Step #3: Make updates to the vsftpd.conf file

Edit your vsftpd conf file by typing:

```
> sudo vi /etc/vsftpd/vsftpd.conf
```

Disable anonymous FTP by changing this line:

`anonymous_enable=YES`
to

`anonymous_enable=NO`
Then add the following lines to the bottom of the vsftpd.conf file:

`pasv_enable=YES pasv_min_port=1024 pasv_max_port=1048 pasv_address=<Public IP of your instance>`
Your vsftpd.conf file should look something like the following - except make sure to replace the pasv_address with your public facing IP address:

```
listen=YES
#
# This directive enables listening on IPv6 sockets. To listen on IPv4 and IPv6
# sockets, you must run two copies of vsftpd with two configuration files.
# Make sure, that one of the listen options is commented !!
#listen_ipv6=YES

pam_service_name=vsftpd
userlist_enable=YES
tcp_wrappers=YES

pasv_enable=YES
pasv_min_port=1024
pasv_max_port=1048
pasv_address=107.22.223.98
```

To save changes, press escape, then type `:wq`, then hit enter.

Step #4: Restart vsftpd

Restart vsftpd by typing:

```
> sudo /etc/init.d/vsftpd restart
```
You should see a message that looks like:

```
[ec2-user@ip-10-243-73-113 ~]$ sudo /etc/init.d/vsftpd restart
Shutting down vsftpd:                                      [FAILED]
Starting vsftpd for vsftpd:                                [  OK  ]
[ec2-user@ip-10-243-73-113 ~]$
```

Step #5: Create an FTP user

If you take a peek at /etc/vsftpd/user_list, you'll see the following:

```
# vsftpd userlist # If userlist_deny=NO, only allow users in this file # If
userlist_deny=YES (default), never allow users in this file, and # do not even prompt
for a password. # Note that the default vsftpd pam config also checks
/etc/vsftpd/ftpusers # for users that are denied. root bin daemon adm lp sync shutdown
halt mail news uucp operator games nobody
```

This is basically saying, "Don't allow these users FTP access." vsftpd will allow FTP access to any user not on this list.

So, in order to create a new FTP account, you may need to create a new user on your server. (Or, if you already have a user account that's not listed in /etc/vsftpd/user_list, you can skip to the next step.)

Creating a new user on an EC2 instance is pretty simple. For example, to create the user 'bret', type:

```
> sudo adduser bret > sudo passwd bret
```

Here's what it will look like:

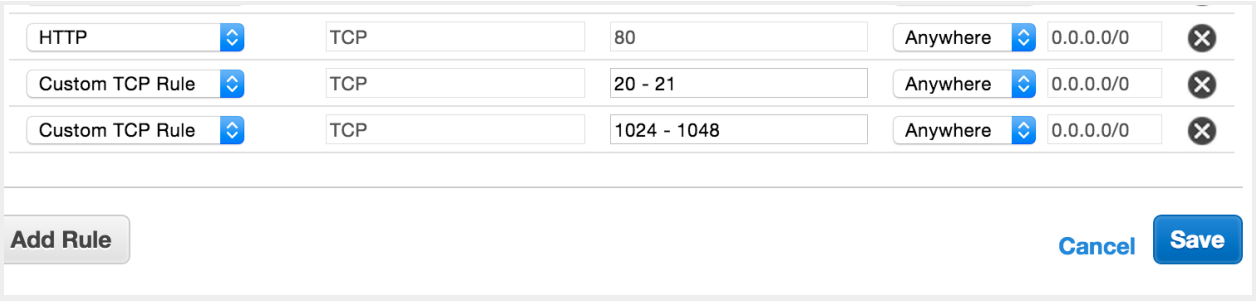
```
[ec2-user@ip-10-243-73-113 ~]$ sudo adduser bret
[ec2-user@ip-10-243-73-113 ~]$ sudo passwd bret
Changing password for user bret.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[ec2-user@ip-10-243-73-113 ~]$
```

Restart the vsftpd server again like so:

```
> sudo /etc/init.d/vsftpd restart
```

Add the HTTP rule

You now need to open the http port as you have done with other ports in step 2 of the FTP configuration. Go to the security rules the same way you did before and allow the http port (80) to be accessible from anywhere.



Creating the database

Access your server and create a database. To do so enter the following commands:

mysql -u root -p

your_password_defined_previously_for_root

create database <database_name>

exit

Transfering the files

Using your favourite FTP client (for example FileZilla) transfer all the files to the folder called var/www/html. Once you have all the files transfered modify the **config.php** file and insert the information of the database you created in the previous step.

Now access your ip address from a web browser. This should create the whole database schema and some basic information for the settings table.

Configuring your Faucet

Using the same procedure as when you created the database connect to your database.

insert the following commands:

use **<database_name>**

select * from settings;

You will see all the default settings in the table. To modify them insert the following command:

update settings set value=<new_data> where name= ‘<setting_to_modify>’.

For example:

update settings set value=30 where name= ’timer’.

This will change the timer to half an hour.
Important: If you copy this command replace the ’ and ’ symbol with a regular single bracket.

Enjoy your Faucet!