Digital Ocean Server Setup & Node.js Deployment

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In this post I will include the steps, commands and code that we used in the Node.js Deployment video (https://youtu.be/RE2PLyFqCzE). This is not only deployment but also preparing our server with SSH keys and some security precautions such as disabling password and root login.

Sign Up

You need to create a Digital Ocean account. Please use my affiliate link below and get $10 (2 months) free credit

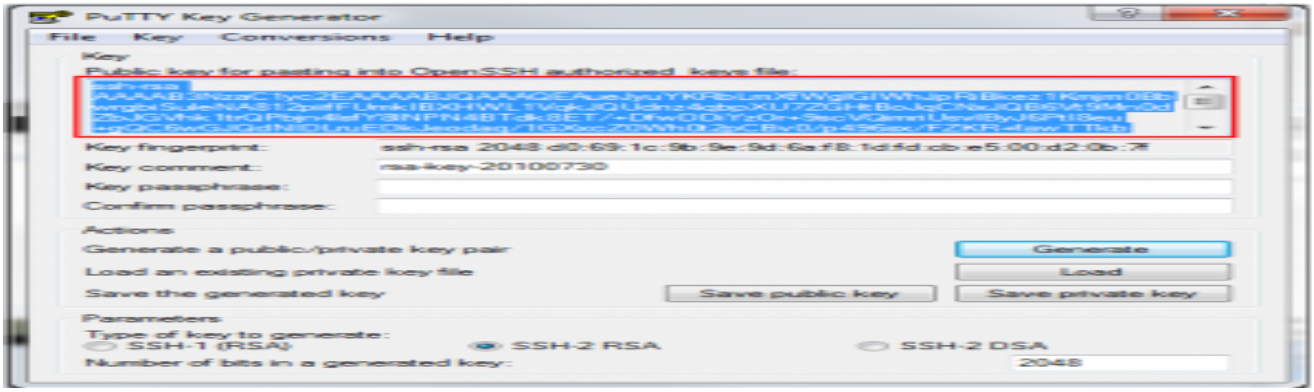
Sign Up With This Link (https://m.do.co/c/5424d440c63a)

1. Add your PayPal/CC account info. You will not be charged until you buy a package
2. Choose your OS – I would suggest Ubuntu unless you have another preference
3. Choose a size/package. We use the $5 per month in the video
4. Setup your SSH keys below

SSH Key Setup

Download Putty and PuttyGen from here (http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html)

- Open PuttyGen and click **"Generate"**
- Copy the public key in the window



- Save the public key as publickey.txt (or whatever you want)
- Save the private key as privatekey.ppk (or whatever you want)
- Go back to the Digital Ocean page and paste in the key and name it

Continue to create your droplet

Connect via Putty

Once your droplet is setup, open up **Putty.exe**

- Type in your server/droplet IP address in **Host name**
- Click on the **Connection->Data** tab and add **"root"** in the **Auto-login username** field
- Click on the **SSH->Auth** tab and browse for your **private key .ppk** file
- Go back to the **Session** tab, name it and click **"Save"**
- Click **Open** to connect

You should now be able to connect with the root user using your SSH keys

Create New User

Now you want to create a new user. We will use the username **"myuser"** for this tutorial

```
adduser myuser
```

Add the user to the sudo group

```
usermod -aG sudo myuser
```

Check to make sure they were added

```
id myuser
```

Login as that user

```
sudo su - myuser
```

Authorize Key For New User

Create a .ssh directory

```
mkdir ~/.ssh
```

```
chmod 700 ~/.ssh
```

Enter the authorized_keys file

```
nano ~/.ssh/authorized_keys
```

Paste in **your key** in this format with NO LINEBREAKS

```
ssh-rsa AAAAB3NzaC1yc2EAAAABJQAAAQEAn+XWIQCPgauEZFR4YNxqdqM94DqpuLQlHcyFd27/mYXSGaWZE9xROHHv4VrSYOdD4gPGVD
zL1XWt+c81jBC++YntcxNbljYQP0gkV1+KwiS4+2UuocRBVlQfkSHROr92PmNpRPMGuyeC9luLSNakUrDpIIFFVt52gZhM9pOR
k7WEBoDn8cWz65hpN9ZOMmfRfRwDfFDjJ0XDVubB9/XfKGVlRgN6x6GIj0Wab3n7z/Gw7ifOFxrXKT7GRP/KMl0HPXZHSlNt9M
EMa8B5FT29Kte4KjjMdyS9nJqTj5UeUXvNQPM8iYczS/lJxV7lSSkwfO+8BrBz9L/N+B3Vm9maSQ==
```

Exit and save (ctrl-x then ctrl-y then Enter)

Now change the permissions of the file

```
chmod 600 ~/.ssh/authorized_keys
```

Restart the ssh service

```
sudo service ssh restart
```

Close the putty window and re-enter then try connecting with the new username and the ssh key

Disable Root & Password Login

Once logged in as the new user, edit the sshd_config file

```
sudo nano /etc/ssh/sshd_config
ctrl + w to search
```

Change to the following
PermitRootLogin no
PasswordAuthentication no

Exit the file and save (ctrl-x then ctrl-y then Enter)

Reload sshd with this command

```
sudo systemctl reload sshd
```

You can test out the password and root login now if you want to make sure it does not let you in

Install Node.js On The Server

```
curl -sL https://deb.nodesource.com/setup_6.x | sudo -E bash -
sudo apt-get install nodejs
```

Now node should be installed. To check use

```
node -v
```

Install Git On The Server

```
sudo apt-get install git
```

Create SSH Key For Github

Now you need to create your SSH key got Github

```
ssh-keygen -t rsa -C "your_email@example.com"
```

It will get saved to *home/myuser/.ssh/id_rsa.pub*

Copy that key in that file. I would suggest using **WinSCP** to download he file and copy the key. Download WinSCP here (https://winscp.net/eng/download.php)

Once you copy the key, sign into Github and goto **"Settings->SSH and GPG Keys"** and add and name the new key

Clone The Node.js App From Github And Test

```
git clone git@github.com:heroku/node-js-sample.git
cd node-js-sample
npm install
npm start
```

Now go to your browser and put **http://YOURSERVERIP:5000** and you should see your apps Hello World page

Stop the app with **ctrl + c**

Install PM2

Install PM2 so you can run the app as a process

```
sudo npm install pm2 -g
pm2 start index.js
```

Your app should now be running as a process

Add A Domain Name

Go to your domain registrar and add the following nameservers for the domain..

ns1.digitalocean.com
ns2.digitalocean.com
ns3.digitalocean.com

It may take a few hours for the DNS to kick in

Now go to your Digital Ocean panel and go to **"Networking->Domains"** and add the domain there

Create An A Record

Put **@** in the **hostname** and then your **droplet IP** in the **"Will Direct To"** field

Create a CNAME

Put **www** in **host name** and **@** in the **"In Alias Of"** field

Your domain should now be setup. Go to **http://yourdomain.com:5000.** It may take a bit to propogate the DNS

Change to port 80

Stop the app with

```
pm2 stop index.js
```

Open up your apps **index.js** file and change port **5000** to port **80**

Install the libcap2-bin package

```
sudo apt-get install libcap2-bin
```

Run this command

```
sudo setcap cap_net_bind_service=+ep `readlink -f \`which node\``
```

Start your app up again

```
pm2 start index.js
```

Now visit http://yourdomain.com

You should see your app up and running.

I hope you enjoyed this. Please use the link below to purchase a Digital Ocean package

https://m.do.co/c/5424d440c63a (https://m.do.co/c/5424d440c63a)

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acomment says:
January 21, 2017 at 3:54 pm (http://www.traversymedia.com/deploying-node-js-to-digital-ocean/#comment-5)
Great article and video. Keep it up good work.

Reply (http://www.traversymedia.com/deploying-node-js-to-digital-ocean/?replytocom=5#respond)

- 

p1oneer says:
January 23, 2017 at 9:15 pm (http://www.traversymedia.com/deploying-node-js-to-digital-ocean/#comment-6)
Very goot tutorial. Please help me. When i enter comand pm2 start, appears error “missing required arument ‘file | json | stdin | app_name | pm_id’ “. what i need to do?

Reply (http://www.traversymedia.com/deploying-node-js-to-digital-ocean/?replytocom=6#respond)

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