

Cointopay International B.V. Crypto Payment Provider you can trust

# COINTOPAY PLATFORM INSTALLATION

This installation instruction will show you from beginning to end how to install the COINPRESS.CLUB release.

## Prerequisites

The home of Cointopay is on Ubuntu 15.x 64bit, but you can choose any other Linux or even Windows distribution. For help with any deviations, please use the Coinpress.club forum, this one will focus on digital ocean as cloud provider, due to being low cost and pretty stable. Platform can run on AWS with ELB and Elastic Beanstalk, but this is out of scope for this document (topic for coinpress.club forum). We will run a 'flat tier', meaning database, application and one altcoin wallet will all be on the same 10\$ server, with one month free using UBUNTUDROPLET as referral code. Please register an account via this link: <https://www.digitalocean.com/?refcode=fcb3d2dacab1>

## Login and Create a Droplet on Digital Ocean

A droplet is digital ocean speak for creating a server, create it with the following details:

<b>Droplet Hostname</b>	Give it a name like Coinpress
<b>Select Size</b>	SELECT option: 10\$/mo – 1GB / 1CPU 30GB 2TB transfer
<b>Select Region</b>	Any region closest to your customers
<b>Available Settings</b>	Leave unchecked
<b>Select Image</b>	UBUNTU 15.x x64
<b>Add SSH Keys</b>	We skip this, it will be an optional feature in the appendix

Once you have made the required selections, click on create Droplet. Creation of the droplet will take approximately 60 seconds.

## Login Console Access

Download Putty from this location:

<http://the.earth.li/~sgtatham/putty/latest/x86/putty.exe>

Putty is a console based application that allows you to remotely connect to the droplet.

Enter the **Host Name (or IP address)**, give it a name under **Saved Sessions** and click on the **Save** button. Now click on the **Open** button. Click **Yes** when the security alert pops up. Enter login as: **root** the password has been mailed to you, use that **password** to enter it in the Putty screen. Enter the same password again (current) and Enter **new UNIX password**.

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### Inside the Droplet Linux server

Now that we are in we have a couple of missions:

- 1) Install & Configure Tomcat
- 2) Order a domain name
- 3) Install & Configure MySQL
- 4) Misc. updates
- 5) Order & Install certificate
- 6) Import the database tables and relevant data
- 7) Download the Coinpress.club release
- 8) Configure the Coinpress.club application configuration file
- 9) Install the Coinpress.club application
- 10) Testing & Validation
- 11) Troubleshooting
- 12) Appendix: Install an altcoin wallet daemon
- 13) Appendix: Setup XChange (in case you don't want to work directly with wallets)
- 14) Appendix: Setup Interconnect
- 15) Setup Payeer to accept fiat payments
- 16) Setup Paypal to accept fiat payments

The initial setup is focusing on the installation of one altcoin wallet with minimal configuration parameters. Any additional configurations are topics for the Coinpress.club forum.

### **IMPORTANT**

Please note that the application is a high risk target for hackers, Cointopay.com has had its fair share of battle testing, the items mentioned are best practises from the field, and any deviations from what is written in this document are fully your responsibility. First validate before trying, there is no room for error with a financial system like this. If you feel some items can be improved, please mention it on the forum your feedback will always be appreciated.

### Before starting

Perform a package update and upgrade to make your droplet current.

```
apt-get -y update ; apt-get -y upgrade
```

### Installation of Tomcat8

Tomcat is a highly secure Java application platform that is maintained by the Apache foundation and is very easy to use. The following commands need to be executed.

```
apt-get install tomcat8
```

Do you want to continue: **click ENTER**

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```
service tomcat8 start
```

```
update-rc.d tomcat8 defaults
```

```
nano /var/lib/tomcat8/conf/tomcat-users.xml
```

add below line above </tomcat-users> but change the name and password:

```
<role rolename="manager-gui"/>
<user name="usernamecoin" password="passwordcosdcmcko" roles="manager-gui" />
```

CTRL-X then type Y the ENTER (file should be saved)

```
apt-get install tomcat8-admin
```

```
nano /etc/default/tomcat8
```

add to JAVA\_OPTS line: -Djava.security.egd=file:/dev/./urandom

```
/etc/init.d/tomcat8 restart
```

ifconfig will show you the inet addr: your ip, go to your favorite browser and test this: <http://<your ip>:8080/manager>

Login with your user/password combination specified above. If you see below then this stage is complete!



**Tomcat Web Application Manager**

Message: OK

**Manager**

List Applications      HTML Manager Help      Manager Help

Applications					
Path	Version	Display Name	Running	Sessions	Commands
/	None specified		true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/host-manager	None specified	Tomcat Host Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

**Deploy**

Deploy directory or WAR file located on server

Context Path (required):

XML Configuration file URL:

WAR or Directory URL:

Deploy

### Install & Configure MySQL

MySQL is a database that has been around for some time now, the 5.6 release is improved by Oracle on performance level. We use it because it's free and easy to use.

```
apt-get install mysql-server-5.6
```

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CTRL-X then type Y the ENTER (file should be saved)

Set the New password for the MySQL "root" user

F00F1GHT3R012954F00F00

In case you lose your root access to the database, please see the appendix.

update-rc.d mysql defaults

mysql -u root =p

Enter your root password

CREATE DATABASE curpaydb CHARACTER SET utf8 COLLATE utf8\_bin;

SELECT PASSWORD('YOURPASSWORD');

SELECT PASSWORD('TH00NDER!@#W0RLDS');

\*3EB29C984ED19DE5CB6806B4F45B3F9173F9FA34

CREATE USER 'COINPRESSCLUBMAN'@'%' IDENTIFIED BY PASSWORD

\*3EB29C984ED19DE5CB6806B4F45B3F9173F9FA34;

GRANT ALL PRIVILEGES ON `%.\*` TO 'COINPRESSCLUBMAN'@'ip.dynamic.upc.nl' WITH GRANT OPTION

FLUSH PRIVILEGES;

GRANT ALL ON curpaydb.\* TO 'COINPRESSCLUBMAN'@'%';

GRANT ALL PRIVILEGES ON \*.\* TO 'COINPRESSCLUBMAN'@'localhost';

mysql\_secure\_installation

Enter password and press ENTER

Change root password? Type N and press ENTER

Remove anonymous users? Type Y and press ENTER

Disallow root login remotely? Type Y and press ENTER

Remove test database and access to it? Type Y and press Enter

Reload privilege tables now? Type Y and press Enter

For troubleshooting check below.

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### Misc. updates

Buying the hostname and linking it to this IP is out of scope of this instruction.

```
nano /etc/hostname
```

enter your hostname (e.g. unbank.eu)

```
nano /etc/hosts (e.g. 127.0.0.1 unbank.eu)
```

```
iptables -A PREROUTING -t nat -i eth0 -p tcp --dport 80 -j REDIRECT --to-port 8080
```

```
iptables -A PREROUTING -t nat -i eth0 -p tcp --dport 443 -j REDIRECT --to-port 8443
```

```
iptables -t nat -A OUTPUT -p tcp --dport 80 -j DNAT --to 188.166.74.251:8080
```

```
iptables -t nat -A OUTPUT -p tcp --dport 443 -j DNAT --to 188.166.74.251:8443
```

```
iptables-save
```

```
reboot now
```

You will now need to login again to continue the Installation & Configuration of the certificate.

### Order & Install certificate

```
cd /etc/ssl/cert/
```

```
keytool -keysize 2048 -genkey -alias coinpay.eu -keyalg RSA -keystore tomcat.keystore  
password, type: changeit
```

first and lastname: your fully qualified domain name e.g. coinpay.eu

What is the name of your organizational unit? [Unknown]: just click ENTER

What is the name of your organization? [Unknown]: Cointopay International B.V.

What is the name of your City or Locality? [Unknown]: Haarlem

What is the name of your State or Province? [Unknown]: Noord Holland

What is the two-letter country code for this unit? [Unknown]: NL

Is CN=coinpay.eu, OU=Unknown, O=Cointopay International B.V., L=Haarlem, ST=Noord Holland, C=NL correct? Type yes

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```
keytool -certreq -keyalg RSA -alias coinpay.eu -file csr.csr -keystore tomcat.keystore
```

enter the password and type ENTER

```
cat csr.csr
```

```
-----BEGIN NEW CERTIFICATE REQUEST-----
```

Copy the text between these lines or including the two lines, this depends on your certificate host. If you don't know what to do here, don't worry. Contact us at [support@cointopay.com](mailto:support@cointopay.com)

```
-----END NEW CERTIFICATE REQUEST-----
```

Ordering a certificate from [godaddy.com](https://godaddy.com), in that case please follow below instruction from their website documentation. By all means contact us for a cheap SSL certificate, we can offer it against 1/5<sup>th</sup> of the price at [godaddy.com](https://godaddy.com).

### Installing Your SSL in Tomcat (Godaddy specific)

After the certificate is issued, download it from the Certificate Manager and place it in the same folder as your keystore. Then, using keytool, enter the following commands to install the certificates.

The file names for your root and intermediate certificates depend on your signature algorithm.

- SHA-1 root certificate: `gd_class2_root.crt`
- **SHA-2 root certificate:** `gdroot-g2.crt`
- SHA-1 intermediate certificate: `gd.intermediate.crt`
- **SHA-2 intermediate certificate:** `gdig2.crt`

You should not use SSL certificates employing the SHA-1 algorithm ([more info](#)).

You can also download certificates from the [repository](#).

#### To Install Your SSL in Tomcat

1. Install the root certificate by running the following command:

**KEY IN ALL OF THIS ALIAS TOMCAT NEEDS TO BE YOUR FQDN!!** The sequence of the file names:

Gdroot-g2.crt, gdig2.crt and domainname.crt as last under <name of the certificate>

```
keytool -import -alias root -keystore tomcat.keystore -trustcacerts -file <name of the root certificate>
```

2. Install the intermediate certificate by running the following command:

```
keytool -import -alias intermed -keystore tomcat.keystore -trustcacerts -file <name of the intermediate certificate>
```

3. Install the issued certificate into the keystore by running the following command:

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```
keytool -import -alias tomcat -keystore tomcat.keystore -trustcacerts -file <name of the certificate>
```

- Update the `server.xml` `nano /var/lib/tomcat8/conf/server.xml` file with the correct keystore location in the Tomcat directory.

**NOTE:** The HTTPS connector is commented out by default. Remove the comment tags to enable HTTPS.

- Tomcat 4.x** — Update the following elements in `server.xml` for Tomcat 4.x:

```
clientAuth="false"
protocol="TLS" keystoreFile="/etc/tomcat5/tomcat.keystore"
keystorePass="changeit" />
```

- Tomcat 5.x, 6.x and 7.x** — Update the following elements in `server.xml` for Tomcat 5.x, 6.x and 7.x:

```

•
• <!-- Define a SSL Coyote HTTP/1.1 Connector on port 8443 -->
• <!--
• <Connector
•
•     port="8443" maxThreads="200"
•     scheme="https" secure="true" SSLEnabled="true"
•     keystoreFile="<em>path to your keystore file</em>"
•     keystorePass="changeit"
•
•     clientAuth="false" sslProtocol="TLS" />
```

- Save your changes to `server.xml`, and then restart Tomcat to begin using your SSL. Your SSL Certificate is installed. If you have problems, please see [Where can I get information about my SSL's configuration?](#) to help diagnose issues.
- Delete a certificate in case of a mistake:

```
keytool.exe -delete -alias <alias> -keystore tomcat.keystore -storepass changeit -v
```

```
<Connector port="8080" protocol="HTTP/1.1"
```

```
    connectionTimeout="20000"
```

```
    redirectPort="443" />
```

```
<Connector executor="tomcatThreadPool"
```

```
    port="8080" protocol="HTTP/1.1"
```

```
    connectionTimeout="20000"
```

```
    redirectPort="443" />
```

```
<Connector port="8443" protocol="org.apache.coyote.http11.Http11Protocol"
```

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```
scheme="https" secure="true" SSLEnabled="true"
keystoreFile="/etc/tomcat8/tomcat.keystore" keystorePass="changeit"
clientAuth="false" sslProtocol="TLS" />
```

SECURE COOKIE FLAG:

```
/usr/share/tomcat7/conf/web.xml
```

```
<session-config>
  <session-timeout>30</session-timeout>
  <cookie-config>
    <http-only>true</http-only>
    <secure>true</secure>
  </cookie-config>
</session-config>
```

APR: apt-get install libtcnative-1

### Import the database tables and relevant data

Use a MySQL database client to import the following into the MySQL installation that you just setup.

First DDL then the DATA.

<https://s3-eu-west-1.amazonaws.com/cointopay/DBfilesv100.zip>

### Downloading the Coinpress.club platform

[Download link](#)

### Configuring the application

If you rename the file from .war to .zip you can open up the file. You will see in path:

Coinpress-v1.zip\WEB-INF\classes\properties a file with some configurable settings. If you want to run it behind an ELB you need an additional script, but since this is digital ocean that setting can remain disabled. Once you are done customizing (changing images and other things). Just rename it to ROOT.war and upload it in your Tomcat8. Just simply upload it. Critical factor is the database connectivity.

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### Install the Coinpress.club application

```
cd /var/lib/tomcat8/webapps/ ; rm -Rf ROOT/
```

delete all Applications from here: <https://host:8443/manager/> except the Tomcat Manager Application. Then upload the ROOT.war file via the choose file mechanism!

### Troubleshooting / Issues

#### I want to connect to the MySQL database from a remote location.

Even though this is less secure, it's up to you. You need to edit this file:

```
nano /etc/mysql/mysql.conf.d/mysqld.cnf
```

Put the output ip of `ifconfig` into the bind-address section. Restart your mysql instance:

```
/etc/init.d/mysql restart
```

#### Losing access to the mysql database as root

```
/etc/init.d/mysql stop
```

Start it in safe mode:

```
$ sudo mysqld_safe --skip-grant-tables
(above line is the whole command)
```

This will be an ongoing command until the process is finished so open another shell/terminal window, log in without a password:

```
$ mysql -u root
```

```
mysql> UPDATE mysql.user SET Password=PASSWORD('password') WHERE User='root';
Start MySQL
```

```
/etc/init.d/mysql start
```

your new password is 'password' not the encrypted version!

Tomcat starts very slow resolution

<http://sbzhouhao.net/2015/01/03/Fix-Tomcat7-restart-too-slow-in-Ubuntu-14-04/>

```
-Djava.security.egd=file:/dev/./urandom
```

I have a huge Exchange table and it's affecting performance:

Update the `exchangeidheight` propertie to include the latest id's do include a buy/sell of 1 for all currencypairs.

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### Facts appendix

Altcoins located in the AltCoin table marked as type 1 are marked as Secure Cloud. This means that backups are made daily for these wallets. Restoration of these wallets is a manual intervention.

Luckily wallets usually don't get corrupted.

Any questions:

[support@cointopay.com](mailto:support@cointopay.com)