

UNIVERSITY OF WOLLONGONG



Bachelor of Computer Science - Digital Systems Security

## **CryptBase**

### **Trapdoor Knapsack Simulator**

#### *Technical Deployment Guide*

**Presented by CSCI321-SSP19\_2C**

WU CHUJUN ( 5988329 )

CHONG JIAHAO ( 4799276 )

MARCUS TAN YONGHUA ( 6212621 )

KYAW MYO AUNG ( 6097868 )

<Project website: <https://cryptbase321.wixsite.com/home/blog/>>

## **Host Operating System**

- Ubuntu 18.04

## **Required Files:**

- dbScript\_v2.1.sql
- CryptBase.zip

## **Deployment guide**

Step 1 : MySQL Database Deployment.....	3
Step 2 : Install NodeJS and Set-up CryptBase.....	4

## Step 1 : MySQL Database Deployment

1. Open terminal
2. Use ``sudo apt-get update`` to update the package list.
3. Use ``sudo apt-get install mysql-server-5.7`` to install MySQL server.
4. Check if mysql is running. (Hint: Use ``systemctl start mysql`` to start service)

```
test@ubuntu:~/Desktop$ systemctl status mysql
● mysql.service - MySQL Community Server
   Loaded: loaded (/lib/systemd/system/mysql.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2019-08-20 07:12:13 PDT; 3min 1s ago
     Main PID: 87403 (mysqld)
        Tasks: 28 (limit: 2293)
       CGroup: /system.slice/mysql.service
               └─87403 /usr/sbin/mysqld --daemonize --pid-file=/run/mysqld/mysqld.pid

Aug 20 07:12:13 ubuntu systemd[1]: Starting MySQL Community Server...
Aug 20 07:12:13 ubuntu systemd[1]: Started MySQL Community Server.
```

5. Unzip Code from CryptBase.zip
6. Change directory to extracted file location

```
1620hrs$ ls
AdminLTE-2.4.10  node_modules  'package-lock - Copy.json'  server.js
dbScript_v2.1.sql  package.json  package-lock.json
```

7. Use ``sudo mysql < dbScript_v2.1.sql`` to set-up the database for CryptBase.
8. Configure Firewall to allow remote MySQL access by using command  
``sudo ufw allow mysql``.

```
test@ubuntu:~/Desktop$ sudo ufw allow mysql
Rules updated
Rules updated (v6)
```

9. Done.
10. Test using ``mysql -u root -p``. Password: ``toor``.

Sample Output as shown below:

```
1620hrs$ sudo mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 5.7.27-0ubuntu0.18.04.1 (Ubuntu)

Copyright (c) 2000, 2019, Oracle and/or its affiliates. All rights reserved.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

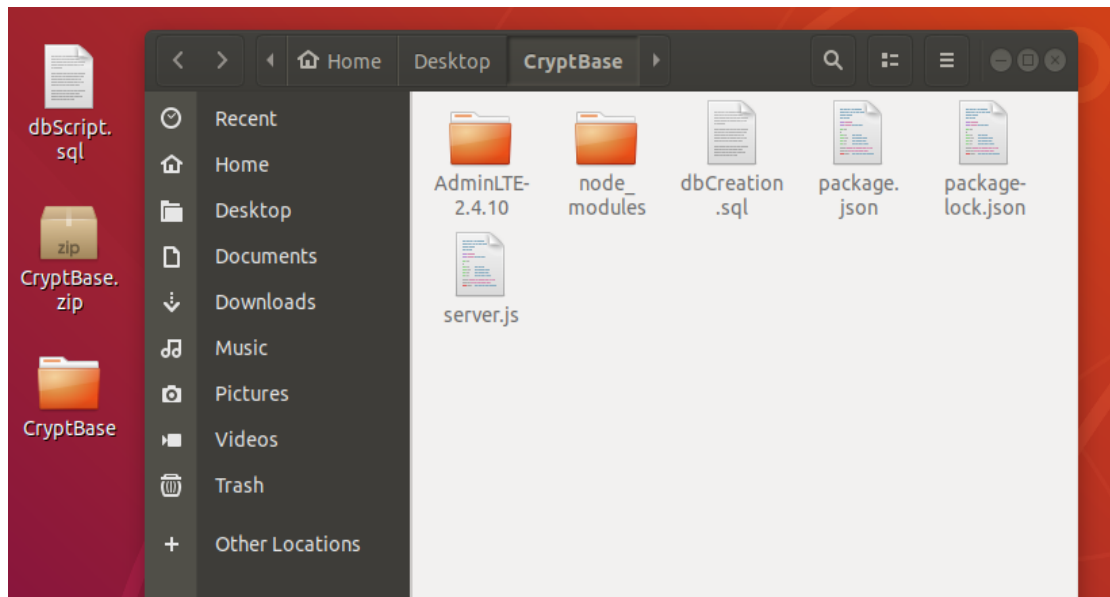
mysql> use FYPV2
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
```

```
Database changed
mysql> show tables
-> ;
+-----+
| Tables_in_FYPV2 |
+-----+
| chat             |
| lecturer         |
| lesson          |
| quiz            |
| student          |
| studentRecord    |
| studentResult    |
| topic            |
| user             |
+-----+
9 rows in set (0.00 sec)

mysql> 
```

## **Step 2 : Install NodeJS and Set-up CryptBase**

1. Use ``sudo apt-get install nodejs`` to install NodeJS.
2. Use ``sudo apt-get install npm`` to install javascript package manager.
3. Download CryptBase.zip and unzip it.



4. Change current directory to CryptBase

```
test@ubuntu:~/Desktop$ cd CryptBase/  
test@ubuntu:~/Desktop/CryptBase$ ll  
total 76  
drwxrwxr-x  4 test test  4096 Aug 20 06:51 ./  
drwxr-xr-x  3 test test  4096 Aug 20 06:51 ../  
drwxrwxr-x 10 test test  4096 Aug 18 08:50 AdminLTE-2.4.10/  
-rw-rw-r--  1 test test  3983 Jul 21 12:47 dbCreation.sql  
drwxrwxr-x 82 test test  4096 Aug 20 06:54 node_modules/  
-rw-rw-r--  1 test test   652 Aug  2 22:31 package.json  
-rw-rw-r--  1 test test 25135 Aug  2 22:31 package-lock.json  
-rw-rw-r--  1 test test 22017 Aug 19 22:29 server.js
```

5. Use `npm i` to install required packages.

```
test@ubuntu:~/Desktop/CryptBase$ npm i  
v1@1.0.0 /home/test/Desktop/CryptBase  
├── connect-multiparty@2.2.0  
├── consolidate@0.15.1  
├── ejs@2.6.2  
├── express-fileupload@1.1.5  
├── mustache@3.0.1  
└── nodejs-base64@1.0.3  
  
npm WARN v1@1.0.0 No description  
npm WARN v1@1.0.0 No repository field.
```

6. Use `node server.js` to start CryptBase service.

```
test@ubuntu:~/Desktop/CryptBase$ node server.js  
Example app listening at http://:::3001  
MySQL Database Connected!
```

7. Done! User is able to access CryptBase by using <http://localhost:3001>

Sample output as shown below

